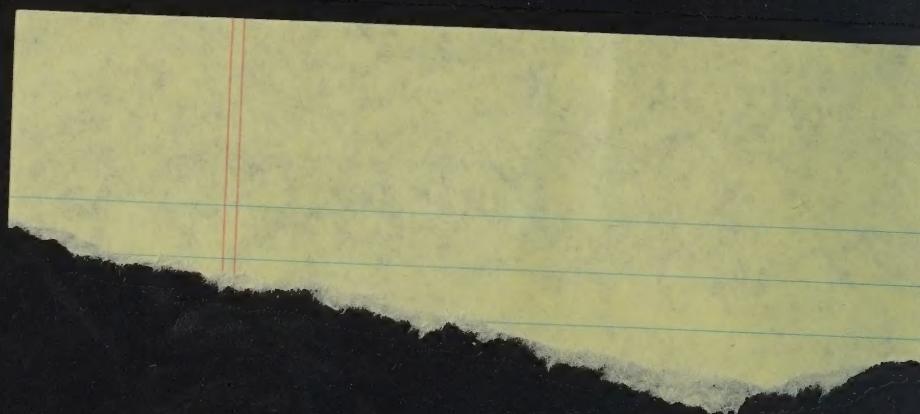


USE  
93% Reduction



00-16-07

# **FT-747GX**

## **TECHNICAL SUPPLEMENT**

**YAESU MUSEN CO., LTD.**  
**C.P.O. BOX 1500**  
**TOKYO, JAPAN**

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## FT-747GX TECHNICAL SUPPLEMENT



This manual is intended to serve as a supplement to the FT-747GX Operating Manual. Detailed information regarding functions, installation, interconnections and operation has been provided in the Operating Manual, and is not reprinted herein. Therefore, this supplement is not intended to serve as an independent reference, but to be used in conjunction with the information provided in the Operating Manual.

Because there are nearly two hundred and fifty semiconductor devices in the FT-747GX, circuit description information is provided in the form of numerous block diagrams. We hope that this manner of providing functional information proves to be more convenient for the owner and technician than would a lengthy verbal description. Those readers unfamiliar with the basic types of analog and digital circuits that serve as the building blocks of the FT-747GX are encouraged to study instructional material, such as that provided in handbooks on amateur radio and digital circuit design, before attempting to understand the design of the FT-747GX. Each block in the block diagrams represents one such basic circuit. General information on integrated circuits and their applications is available in the data provided by the IC manufacturers. Specific circuit details are provided in the schematic diagrams in this manual.

While we believe the technical information in this manual is correct, Yaesu assumes no liability for damage that may occur as a result of typographical or other errors that may be present. Your cooperation in pointing out any inconsistencies in the technical information would be appreciated.

Yaesu Musen reserves the right to make changes in the circuitry of this transceiver, in the interest of technological improvement, without obligation to notify owners or to modify any sets produced prior to the modification.

# TOP COVER REMOVAL

The top cover of the FT-747GX must be removed as described here to install the modifications and internal options described afterwards.

- (1) Switch off the transceiver and disconnect all cables from the rear panel.
- (2) Referring to Figure 1 below, use a sharp instrument (such as a small screwdriver) to depress the catch pin in the strip on the side of the set (near the rear), while sliding the strip towards the rear with

your other hand. Do this on each side to remove both strips.

- (3) With the transceiver facing away from you, grasp the top panel with both hands near the front as shown in Figure 2. There are clips at positions (1) which can move only vertically, and a clip at (2) which can move only horizontally. Lift up on both sides to unlatch the clips at points (1) while holding the center clip (2) in the same position, and slide the top panel back about 2 centimeters ( $\frac{1}{2}$ -inch) until the clips clear the top edge of the front panel.

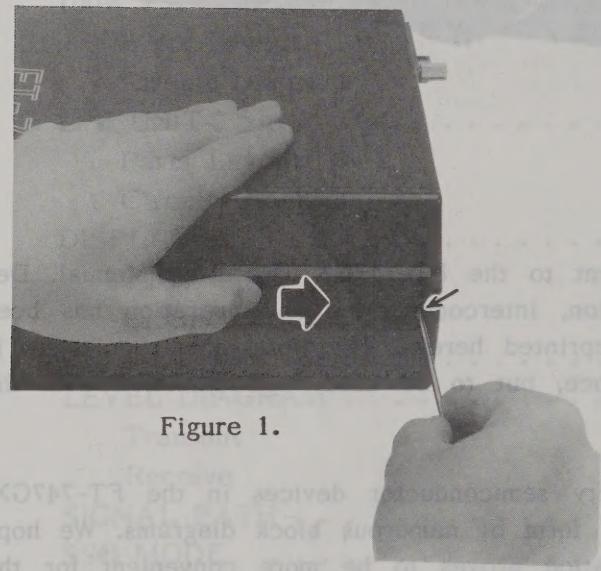


Figure 1.

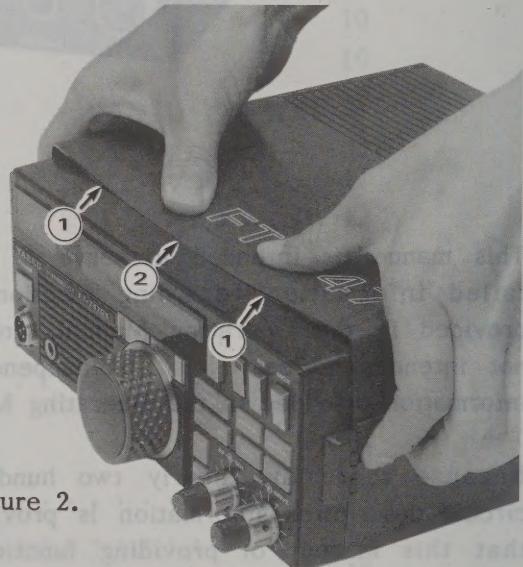
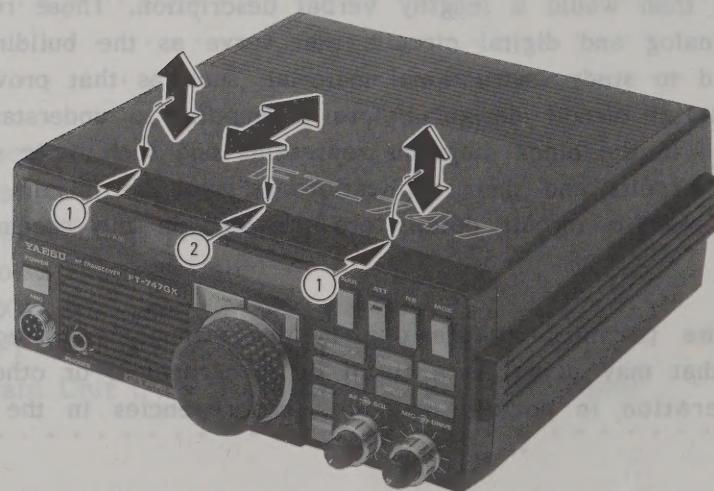


Figure 2.



# PARTS LIST

\*: SSB Filter  
\*\*: CW Filter  
\*\*\*: AM Filter

- 10W Type
- ▲ 100W Type

# PARTS LIST

# PARTS LIST

C4003	K00276161	Ceramic CAP.	SL	500V	160pF		T9205614A	Wire ASSY	JP4001 (P4001)
C4004	K30275122	Mica CAP.		500V	1200pF				
C4005	K30275681	Mica CAP.		500V	680pF				
C4006	K30275561	Mica CAP.		500V	560pF				
C4007	K30275821	Mica CAP.		500V	820pF				
C4008	K00275180	Ceramic CAP.	SL	500V	18pF				
C4009	K30275561	Mica CAP.		500V	560pF				
C4010	K00275241	Ceramic CAP.	SL	500V	240pF		F2946000	Printed Circuit Board	
C4011	K30275122	Mira CAP.		500V	1200pF		C029460AA	PCB with Components	
C4012	K00275820	Ceramic CAP.	SL	500V	82pF				
C4013	K30275621	Mira CAP.		500V	620pF				
C4014	K00275241	Ceramic CAP.	SL	500V	240pF				
C4015	K00275111	Ceramic CAP.	SL	500V	110pF		Q6001	G3321660	Transistor
C4016	K30275681	Mira CAP.		500V	680pF		Q6002	G3090086	Transistor
C4017	K00275360	Ceramic CAP.	SL	500V	36pF		Q6003	G3090086	Transistor
C4018	K00275151	Ceramic CAP.	SL	500V	150pF		Q6004	G1090080	IC
C4019	K00275221	Ceramic CAP.	SL	500V	220pF		Q6005	G3408820Q	Transistor
C4020	K00276161	Ceramic CAP.	SL	500V	160pF		Q6006	G3208240R	Transistor
C4021	K00275430	Ceramic CAP.	SL	500V	43pF		Q6007	G3090079	Transistor
C4022	K30275301	Mira CAP.		500V	300pF		D6001	G2090217	Diode
C4023	K00275111	Ceramic CAP.	SL	500V	110pF		D6002	G2015880	Diode
C4024	K00275111	Ceramic CAP.	SL	500V	110pF		D6003	G2090306	Diode
C4025	K00275101	Ceramic CAP.	SL	500V	100pF		D6004	G2015550	Diode
C4026	K00275430	Ceramic CAP.	SL	500V	43pF		D6005	G2015550	Diode
C4027	K00275151	Ceramic CAP.	SL	500V	150pF		D6006	G2015550	Diode
C4028	K00275820	Ceramic CAP.	SL	500V	82pF		R6001	J02225221	Carbon Film RES.
C4029	K00275120	Ceramic CAP.	SL	500V	12pF		R6002	J02225471	Carbon Film RES.
C4030	K00275111	Ceramic CAP.	SL	500V	110pF		R6003	J02225681	Carbon Film RES.
C4031	K00275820	Ceramic CAP.	SL	500V	82pF		R6004	J01225821	Carbon Film RES.
C4032	K00275330	Ceramic CAP.	SL	500V	33pF		R6005	J02225181	Carbon Film RES.
C4033	K00276161	Ceramic CAP.	SL	500V	160pF		R6006	J01275150	Carbon Film RES.
C4034	K00275120	Ceramic CAP.	SL	500V	12pF		R6007	J01275150	Carbon Film RES.
C4035	K00275910	Ceramic CAP.	SL	500V	91pF		R6008	J01275331	Carbon Film RES.
C4036	K00175221	Ceramic CAP.	SL	50V	220pF		R6009	J01275331	Carbon Film RES.
C4037	K00175221	Ceramic CAP.	SL	50V	220pF		R6010	J01275390	Carbon Film RES.
C4038	K00275100	Ceramic CAP.	SL	500V	10pF		R6012	J02225102	Carbon Film RES.
C4039	K13179009	Ceramic CAP.	F	50V	0.047uF		R6013	J02225103	Carbon Film RES.
C4040	K13179009	Ceramic CAP.	F	50V	0.047uF		R6014	J02225331	Carbon Film RES.
C4041	K13179009	Ceramic CAP.	F	50V	0.047uF		R6015	J20336680	Metal Film RES.
C4042	K13179009	Ceramic CAP.	F	50V	0.047uF		VR6001	J51727222	POT.
C4043	K13179009	Ceramic CAP.	F	50V	0.047uF			B	2.2k ohm
C4044	K13179009	Ceramic CAP.	F	50V	0.047uF				
C4045	K13179009	Ceramic CAP.	F	50V	0.047uF		C6001	K13179009	Ceramic CAP.
C4046	K13179009	Ceramic CAP.	F	50V	0.047uF		C6002	K13179009	Ceramic CAP.
C4047	K13179009	Ceramic CAP.	F	50V	0.047uF		C6003	K00175221	Ceramic CAP.
C4048	K13179009	Ceramic CAP.	F	50V	0.047uF		C6004	K13179009	Ceramic CAP.
C4049	K13179009	Ceramic CAP.	F	50V	0.047uF		C6005	K13179009	Ceramic CAP.
C4050	K13179009	Ceramic CAP.	F	50V	0.047uF		C6006	K40129004	AL. Electro. CAP.
C4051	K13179009	Ceramic CAP.	F	50V	0.047uF		C6007	K00275121	Ceramic CAP.
C4052	K13179009	Ceramic CAP.	F	50V	0.047uF		C6008	K13179009	Ceramic CAP.
C4053	K13179009	Ceramic CAP.	F	50V	0.047uF		C6009	K13179009	Ceramic CAP.
TC4001	K91000013	Variable CAP.			20pF		C6010	K13179009	Ceramic CAP.
L4001	L0021405	Coil			3.77uH		C6011	K00275151	Ceramic CAP.
L4002	L0021406	Coil			2.94uH		C6012	K00275151	Ceramic CAP.
L4003	L0020615	Coil			1.90uH		C6013	K00275151	Ceramic CAP.
L4004	L0021433	Coil			2.40uH		C6014	K10179024	Ceramic CAP.
L4005	L0020617	Coil			1.10uH		C6015	K13179009	Ceramic CAP.
L4006	L0020618	Coil			1.32uH		C6016	K50177154	Film CAP.
L4007	L0021407	Coil			0.62uH		C6017	K50177154	Film CAP.
L4008	L0021408	Coil			0.46uH		C6018	K13179008	Ceramic CAP.
L4009	L0021855	Coil					C6019	K13179008	Ceramic CAP.
L4010	L0021856	Coil					C6020	K13179009	Ceramic CAP.
L4011	L0021857	Coil					C6021	K40129004	AL. Electro. CAP.
L4012	L0021858	Coil					C6022	K13179009	Ceramic CAP.
L4013	L0021859	Coil					C6023	K13179009	Ceramic CAP.
L4014	L1190090	M. RFC			1mH		C6024	K13179009	Ceramic CAP.
L4015	L1190090	M. RFC			1mH		C6025	K13179008	Ceramic CAP.
RL4001	M1190045	Relay			AG2013 (DC12V)		C6026	K40129008	AL. Electro. CAP.
RL4002	M1190045	Relay			AG2013 (DC12V)		C6027	K13179009	Ceramic CAP.
RL4003	M1190045	Relay			AG2013 (DC12V)		C6028	K40129021	AL. Electro. CAP.
RL4004	M1190045	Relay			AG2013 (DC12V)		C6029	K13179009	Ceramic CAP.
RL4005	M1190045	Relay			AG2013 (DC12V)		C6030	K13179008	Ceramic CAP.
RL4006	M1190045	Relay			AG2013 (DC12V)		C6031	K13179008	Ceramic CAP.
RL4007	M1190045	Relay			AG2013 (DC12V)		C6032	K00275360	Ceramic CAP.
RL4008	M1190045	Relay			AG2013 (DC12V)		L6001	L1190149	M. RFC
RL4009	M1190045	Relay			AG2013 (DC12V)		L6002	L1190213	M. RFC
RL4010	M1190045	Relay			AG2013 (DC12V)		L6003	L1020032	RFC
RL4011	M1190045	Relay			AG2013 (DC12V)		L6004	L1020015	RFC
RL4012	M1190045	Relay			AG2013 (DC12V)		L6005	L1020032	RFC
RL4013	M1190078	Relay			AG2017 (DC9V)		L6006	L1020666A	RFC
	T9317815	Wire ASSY			P4002				1uH
	T9205615	Wire ASSY			P4003				39uH
	T9317816	Wire ASSY			P4004				9.9uH

# PARTS LIST

D3007	G2060004	Diode	ISS270TJ	C3023	K40129012	AL. Electro. CAP.	16V	10uF	
D3008	G2090118	Diode	ISS97	C3025	K19149023	Ceramic CAP.	25V	0.068uF	
D3009	G2090118	Diode	ISS97	C3026	K40129012	AL. Electro. CAP.	16V	10uF	
D3010	G2090415	Diode	GL8PG25	C3027	K28129001	Ceramic CAP.	Y	16V 0.01uF	
D3011	G2060004	Diode	ISS270TJ	C3028	K13179009	Ceramic CAP.	F	50V 0.047uF	
D3012	G2060004	Diode	ISS270TJ	C3029	K13179009	Ceramic CAP.	F	50V 0.047uF	
D3013	G2060004	Diode	ISS270TJ	C3030	K40179010	AL. Electro. CAP.	50V	0.47uF	
DS3001	G6090066	LCD	FTD8627PZ	C3034	K40179005	AL. Electro. CAP.	50V	0.74uF	
CO3001	H3900170	Ceramic Filter	CSA400MG5	C3035	K40129012	AL. Electro. CAP.	16V	10uF	
R3001	J01225391	Carbon Film RES.	1/6W 390 ohm	C3036	K13179008	Ceramic CAP.	F	50V 0.01uF	
R3004	J01225105	Carbon Film RES.	1/6W 1M ohm	C3037	K40179013	AL. Electro. CAP.	50V	1uF	
R3006	J01225101	Carbon Film RES.	1/6W 100 ohm	S3001	Q9000394	Rotary Code Switch			
R3007	J01225103	Carbon Film RES.	1/6W 10k ohm	S3002	N5090010	Tact Switch	KEG10904		
R3008	J01225473	Carbon Film RES.	1/6W 47k ohm	S3003	N5090010	Tact Switch	KEG10904		
R3009	J01225102	Carbon Film RES.	1/6W 1k ohm	S3004	N5090010	Tact Switch	KEG10904		
R3010	J01225104	Carbon Film RES.	1/6W 100k ohm	S3005	N5090010	Tact Switch	KEG10904		
R3011	J01225103	Carbon Film RES.	1/6W 10k ohm	S3006	N5090010	Tact Switch	KEG10904		
R3012	J01225472	Carbon Film RES.	1/6W 4.7k ohm	S3007	N5090010	Tact Switch	KEG10904		
R3014	J01225104	Carbon Film RES.	1/6W 100k ohm	S3008	N5090010	Tact Switch	KEG10904		
R3015	J01225473	Carbon Film RES.	1/6W 47k ohm	S3009	N5090010	Tact Switch	KEG10904		
R3017	J01225473	Carbon Film RES.	1/6W 47k ohm	S3010	N5090010	Tact Switch	KEG10904		
R3018	J01225472	Carbon Film RES.	1/6W 4.7k ohm	S3011	N5090010	Tact Switch	KEG10904		
R3019	J01225103	Carbon Film RES.	1/6W 10k ohm	S3012	N5090010	Tact Switch	KEG10904		
R3020	J01225103	Carbon Film RES.	1/6W 10k ohm	S3013	N5090010	Tact Switch	KEG10904		
R3021	J01225473	Carbon Film RES.	1/6W 47k ohm	S3014	N5090010	Tact Switch	KEG10904		
R3022	J01225101	Carbon Film RES.	1/6W 100 ohm	S3015	N4090081	Push Switch	SPH121C16		
R3023	J01225101	Carbon Film RES.	1/6W 100 ohm	S3016	N4090081	Push Switch	SPH121C16		
R3024	J01225470	Carbon Film RES.	1/6W 47 ohm	S3017	N4090081	Push Switch	SPH121C16		
R3025	J01225010	Carbon Film RES.	1/6W 1 ohm	S3018	N4090081	Push Switch	SPH121C16		
R3026	J01225229	Carbon Film RES.	1/6W 2.2 ohm	S3019	N6090061	Slide Switch	SSJ-012M		
R3027	J01225221	Carbon Film RES.	1/6W 220 ohm	J3002	P0090203	Connector	S02B-XH-A		
R3028	J01225104	Carbon Film RES.	1/6W 100k ohm	J3003	P0090638	Connector	SC25-0.5WL		
R3029	J01225221	Carbon Film RES.	1/6W 220 ohm	J3004	P0090637	Connector	SC25-0.3WL		
R3030	J01225272	Carbon Film RES.	1/6W 2.7k ohm	J3005	P0090639	Connector	SC25-0.6WL		
R3031	J01225681	Carbon Film RES.	1/6W 680 ohm	PL3001	Q1000010	Lamp	BQ041-22803A		
R3032	J01225122	Carbon Film RES.	1/6W 1.2k ohm	PL3002	Q1000010	Lamp	BQ041-22803A		
R3033	J01225473	Carbon Film RES.	1/6W 47k ohm	PL3003	Q1000010	Lamp	BQ041-22803A		
R3034	J01225473	Carbon Film RES.	1/6W 47k ohm	BAT 3001	Q9000106	Lithium Battery	CR2025-HM1		
R3035	J01225473	Carbon Film RES.	1/6W 47k ohm	Q9000192	Sarcon		30F-TO-220		
R3036	J01225473	Carbon Film RES.	1/6W 47k ohm	R0102810	Nut Board				
R3037	J01225473	Carbon Film RES.	1/6W 47k ohm	R3124170A	Light Reflector				
R3038	J01225473	Carbon Film RES.	1/6W 47k ohm	R0124180	Heatsink Plate				
R3039	J01225473	Carbon Film RES.	1/6W 47k ohm	R7125120A	Filter				
R3040	J01225473	Carbon Film RES.	1/6W 47k ohm	R7125420	Sponge				
R3041	J01225473	Carbon Film RES.	1/6W 47k ohm	R7125440	Sponge				
R3042	J01225473	Carbon Film RES.	1/6W 47k ohm	R7126160	Sponge Rubber				
R3043	J01225473	Carbon Film RES.	1/6W 47k ohm	R7126480	Mylar Film				
R3044	J01225473	Carbon Film RES.	1/6W 47k ohm	T9205611	Wire ASSY		JP1-P1		
R3045	J01225103	Carbon Film RES.	1/6W 10k ohm	T9205612	Wire ASSY		JP2-P2		
R3046	J01225560	Carbon Film RES.	1/6W 56 ohm	T9205613	Wire ASSY		JP3-P3		
R3047	J01225560	Carbon Film RES.	1/6W 56 ohm	T9205626	Wire ASSY		JP4-P4		
RB3001	J40900030	Block RES.	8P 47k ohm	T9205636	Wire ASSY		JP5		
C3001	K28129001	Ceramic CAP.	Y 16V 0.01uF	LPF UNIT					
C3002	K40129012	AL. Electro. CAP.		Symbol No.	Part No.	Description		Device	
C3003	K28129001	Ceramic CAP.	Y 16V 0.01uF		F29480000	Printed Circuit Board			
C3004	K40129012	AL. Electro. CAP.			C029480AA	PCB with Components			
C3005	K40179003	AL. Electro. CAP.			D4001	G2090408	Diode	ISS270	
C3006	K28129001	Ceramic CAP.	Y 16V 0.01uF		D4002	G2090408	Diode	ISS270	
C3007	K28129001	Ceramic CAP.	Y 16V 0.01uF		D4003	G2090244	Diode	ISS106	
C3008	K28129001	Ceramic CAP.	Y 16V 0.01uF		D4004	Q9000375	Surge Absorber	DSP201M-SOOB	
C3009	K28129001	Ceramic CAP.	Y 16V 0.01uF		R4002	J02225270	Carbon Film RES.	1/6W 27 ohm	UJ
C3010	K28129001	Ceramic CAP.	Y 16V 0.01uF		R4003	J02225270	Carbon Film RES.	1/6W 27 ohm	UJ
C3011	K00175150	Ceramic CAP.	SL 50V 15p		C4001	K30275102	Mica CAP.		500V 1000pF
C3012	K00175150	Ceramic CAP.	SL 50V 15p		C4002	K00275680	Ceramic CAP.	SL 500V 68pF	
C3013	K40179005	AL. Electro. CAP.							
C3014	K28129001	Ceramic CAP.	Y 16V 0.01uF						
C3015	K19149025	Ceramic CAP.	25V 0.1uF						
C3016	K40129028	AL. Electro. CAP.							
C3017	K40129038	AL. Electro. CAP.							
C3018	K19149025	Ceramic CAP.							
C3019	K40129049	AL. Electro. CAP.							
C3020	K50177104	Film CAP.	50V 0.1uF						
C3021	K40089009	AL. Electro. CAP.	6.3V 470uF						
C3022	K28129001	Ceramic CAP.	Y 16V 0.01uF						

## PARTS LIST

C2107	K40129008	AL. Electro. CAP.		16V	33uF	T2004	L0021861	Coil	5.74MHz
C2108	K28129001	Ceramic CAP.	Y	16V	0.01uF	T2005	L0021380	Coil	0.40uH
C2109	K28129001	Ceramic CAP.	Y	16V	0.01uF	T2006	L0021860	Coil	0.45uH
C2111	K19149025	Ceramic CAP.		25V	0.1uF	T2007	L0021380	Coil	0.40uH
C2112	K40129038	AL. Electro. CAP.		16V	100uF	T2008	L0021380	Coil	0.40uH
C2113	K19149013	Ceramic CAP.		25V	0.01uF	T2009	L0021382	Coil	0.29uH
C2114	K12171102	Ceramic CAP.	E	50V	1000uF	J2001	P0090627	Connector	
C2115	K06179008	Ceramic CAP.	UJ	50V	43uF	J2002	P1090554	Connector	
C2116	K02173070	Ceramic CAP.	CH	50V	7uF	J2003	P1090594	Connector	
C2117	K06172050	Ceramic CAP.	UJ	50V	5uF	T9317814	Wire ASSY	P2001	
C2118	K06175330	Ceramic CAP.	UJ	50V	33uF	T9317813	Wire ASSY	P2002	
C2119	K06175150	Ceramic CAP.	UJ	50V	15uF	T9317812	Wire ASSY	P2003	
C2120	K12171102	Ceramic CAP.	E	50V	1000uF	R0124120	VCO Case		
C2121	K12171102	Ceramic CAP.	E	50V	1000uF	R0124130	VCO Cover		
C2122	K40129008	AL. Electro. CAP.		16V	33uF	R0124140A	Shield Plate		
C2123	K06175470	Ceramic CAP.	UJ	50V	47pF	R0124150A	Shield Plate		
C2124	K06172050	Ceramic CAP.	UJ	50V	5pF	R0124160B	Shield Plate		
C2125	K05175330	Ceramic CAP.	RH	50V	33pF	R0123770	Ground Lead		
C2126	K02173100	Ceramic CAP.	CH	50V	10pF	R0125800	Leaf Spring		
C2127	K12171102	Ceramic CAP.	E	50V	1000pF				
C2128	K40129008	AL. Electro. CAP.		16V	33uF				
C2129	K06175390	Ceramic CAP.	UJ	50V	39pF				
C2130	K06172050	Ceramic CAP.	UJ	50V	5pF				
C2131	K06175220	Ceramic CAP.	UJ	50V	22pF				
C2132	K06172050	Ceramic CAP.	UJ	50V	5pF				
C2133	K12171102	Ceramic CAP.	E	50V	1000pF				
C2134	K40129008	AL. Electro. CAP.		16V	33uF				
C2135	K06179008	Ceramic CAP.	UJ	16V	43pF				
C2136	K05172050	Ceramic CAP.	RH	50V	5pF				
C2137	K05175180	Ceramic CAP.	RH	50V	18pF				
C2138	K05172050	Ceramic CAP.	RH	50V	5pF				
C2139	K12171102	Ceramic CAP.	E	50V	1000pF				
C2140	K40129008	AL. Electro. CAP.		16V	33uF				
C2141	K12171102	Ceramic CAP.	E	50V	1000pF				
C2142	K12171102	Ceramic CAP.	E	50V	1000pF				
C2143	K02172030	Ceramic CAP.	CH	50V	3pF				
C2144	K12171102	Ceramic CAP.	E	50V	1000pF				
C2145	K12171102	Ceramic CAP.	E	50V	1000pF				
C2146	K10176331	Ceramic CAP.	B	50V	330pF				
C2148	K00175270	Ceramic CAP.	SL	50V	27pF				
C2149	K00175560	Ceramic CAP.	SL	50V	56pF				
C2150	K00175270	Ceramic CAP.	SL	50V	27pF				
C2151	K00179013	Ceramic CAP.	SL	50V	91pF				
C2152	K00175470	Ceramic CAP.	SL	50V	47pF				
C2153	K00179013	Ceramic CAP.	SL	50V	91pF				
C2154	K00175560	Ceramic CAP.	SL	50V	56pF				
C2155	K00175560	Ceramic CAP.	SL	50V	56pF				
C2157	K28129001	Ceramic CAP.	Y	16V	0.01uF				
C2158	K12171102	Ceramic CAP.	E	50V	1000pF				
C2159	K12171102	Ceramic CAP.	E	50V	1000pF				
C2161	K00175101	Ceramic CAP.	SL	50V	100pF				
C2162	K28129001	Ceramic CAP.	Y	16V	0.01uF				
C2163	K13179009	Ceramic CAP.	F	50V	0.047uF				
C2164	K19149025	Ceramic CAP.		25V	0.1uF				
C2165	K00175470	Ceramic CAP.	SL	50V	47pF				
C2166	K10176331	Ceramic CAP.	B	50V	330pF				
TC2001	K91000141	Trimmer CAP.			10pF				
TC2002	K91000142	Trimmer CAP.			20pF				
TC2003	K91000142	Trimmer CAP.			20pF				
TC2004	K91000186	Trimmer CAP.			20pF				
L2001	L1190223	M. RFC			270uH				
L2002	L1190024	M. RFC			220uH				
L2003	L1190038	M. RFC			270uH				
L2004	L1190005	M. RFC			1uH				
L2010	L1190029	M. RFC			47uH				
L2011	L1190014	M. RFC			10uH				
L2012	L1190011	M. RFC			4.7uH				
L2013	L1190005	M. RFC			1uH				
L2014	L0021410	Coil			0.147uH				
L2015	L0021410	Coil			0.147uH				
L2016	L0021409	Coil			0.117uH				
L2017	L0021409	Coil			0.117uH				
L2018	L1190190	M. RFC			0.27uH				
L2020	L1190218	M. RFC			100uH				
L2021	L1190218	M. RFC			100uH				
T2001	L0021862	Coil			44.6MHz				
T2002	L0021862	Coil			44.6MHz				
T2003	L0021862	Coil			44.6MHz				
T2004	L0021862	Coil			44.6MHz				
T2005	L0021862	Coil			44.6MHz				
T2006	L0021862	Coil			44.6MHz				
T2007	L0021862	Coil			44.6MHz				
T2008	L0021862	Coil			44.6MHz				
T2009	L0021862	Coil			44.6MHz				
T2010	L0021862	Coil			44.6MHz				
T2011	L0021862	Coil			44.6MHz				
T2012	L0021862	Coil			44.6MHz				
T2013	L0021862	Coil			44.6MHz				
T2014	L0021862	Coil			44.6MHz				
T2015	L0021862	Coil			44.6MHz				
T2016	L0021862	Coil			44.6MHz				
T2017	L0021862	Coil			44.6MHz				
T2018	L0021862	Coil			44.6MHz				
T2019	L0021862	Coil			44.6MHz				
T2020	L0021862	Coil			44.6MHz				
T2021	L0021862	Coil			44.6MHz				
T2022	L0021862	Coil			44.6MHz				
T2023	L0021862	Coil			44.6MHz				
T2024	L0021862	Coil			44.6MHz				
T2025	L0021862	Coil			44.6MHz				
T2026	L0021862	Coil			44.6MHz				
T2027	L0021862	Coil			44.6MHz				
T2028	L0021862	Coil			44.6MHz				
T2029	L0021862	Coil			44.6MHz				
T2030	L0021862	Coil			44.6MHz				
T2031	L0021862	Coil			44.6MHz				
T2032	L0021862	Coil			44.6MHz				
T2033	L0021862	Coil			44.6MHz				
T2034	L0021862	Coil			44.6MHz				
T2035	L0021862	Coil			44.6MHz				
T2036	L0021862	Coil			44.6MHz				
T2037	L0021862	Coil			44.6MHz				
T2038	L0021862	Coil			44.6MHz				
T2039	L0021862	Coil			44.6MHz				
T2040	L0021862	Coil			44.6MHz				
T2041	L0021862	Coil			44.6MHz				
T2042	L0021862	Coil			44.6MHz				
T2043	L0021862	Coil			44.6MHz				
T2044	L0021862	Coil			44.6MHz				
T2045	L0021862	Coil			44.6MHz				
T2046	L0021862	Coil			44.6MHz				
T2047	L0021862	Coil			44.6MHz				
T2048	L0021862	Coil			44.6MHz				
T2049	L0021862	Coil			44.6MHz				
T2050	L0021862	Coil			44.6MHz				
T2051	L0021862	Coil			44.6MHz				
T2052	L0021862	Coil			44.6MHz				
T2053	L0021862	Coil			44.6MHz				
T2054	L0021862	Coil			44.6MHz				
T2055	L0021862	Coil			44.6MHz				
T2056	L0021862	Coil			44.6MHz				
T2057	L0021862	Coil			44.6MHz				
T2058	L0021862	Coil			44.6MHz				
T2059	L0021862	Coil			44.6MHz				
T2060	L0021862	Coil			44.6MHz				
T2061	L0021862	Coil			44.6MHz				
T2062	L0021862	Coil			44.6MHz				
T2063	L0021862	Coil			44.6MHz				
T2064	L0021862	Coil			44.6MHz				
T2065	L0021862	Coil			44.6MHz				
T2066	L0021862	Coil			44.6MHz				
T2067	L0021862	Coil			44.6MHz				
T2068	L0021862	Coil			44.6MHz				
T2069	L0021862	Coil			44.6MHz				
T2070	L0021862	Coil			44.6MHz				
T2071	L0021862	Coil			44.6MHz				
T2072	L0021862	Coil			44.6MHz				
T2073	L0021862	Coil			44.6MHz				
T2074	L0021862	Coil			44.6MHz				
T2075	L0021862	Coil			44.6MHz				
T2076	L0021862	Coil			44.6MHz				
T2077	L0021862	Coil			44.6MHz				
T2078	L0021862	Coil			44.6MHz				
T2079	L0021862	Coil			44.6MHz				
T2080	L0021862	Coil			44.6MHz				
T2081	L0021862	Coil			44.6MHz				
T2082	L0021862	Coil			44.6MHz				
T2083	L0021862	Coil			44.6MHz				
T2084	L0021862	Coil			44.6MHz				
T2085	L0021862	Coil			44.6MHz				
T2086	L0021862	Coil			44.6MHz				
T2087	L0021862	Coil			44.6MHz				
T2088	L0021862	Coil			44.6MHz				
T2089	L0021862	Coil			44.6MHz				
T2090	L0021862	Coil			44.6MHz				
T2091	L0021862	Coil			44.6MHz				
T2092	L0021862	Coil			44.6MHz				
T2093	L0021862	Coil			44.6MHz				
T2094	L0021862	Coil			44.6MHz				
T2095	L0021862	Coil			44.6MHz				
T2096	L0021862	Coil			44.6MHz				
T2097	L0021862	Coil		</td					

# PARTS LIST

R2037	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ	C2011	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2038	J02225681	Carbon Film RES.	1/6W	680 ohm	UJ	C2012	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2039	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ	C2013	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2040	J02225471	Carbon Film RES.	1/6W	470 ohm	UJ	C2014	K02175150	Ceramic CAP.	CH	50V	15pF
R2041	J02225154	Carbon Film RES.	1/6W	150k ohm	UJ	C2015	K02173100	Ceramic CAP.	CH	50V	10pF
R2042	J02225153	Carbon Film RES.	1/6W	15k ohm	UJ	C2016	K02175150	Ceramic CAP.	CH	50V	15pF
R2043	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ	C2017	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2044	J02225471	Carbon Film RES.	1/6W	470 ohm	UJ	C2018	K02175121	Ceramic CAP.	CH	50V	120pF
R2045	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ	C2019	K02175820	Ceramic CAP.	CH	50V	82pF
R2046	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ	C2020	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2047	J02225331	Carbon Film RES.	1/6W	330 ohm	UJ	C2021	K02173080	Ceramic CAP.	CH	50V	8pF
R2048	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ	C2022	K02172050	Ceramic CAP.	CH	50V	5pF
R2049	J02225223	Carbon Film RES.	1/6W	22k ohm	UJ	C2023	K19149021	Ceramic CAP.		25V	0.047uF
R2050	J01225332	Carbon Film RES.	1/6W	3.3k ohm	PJ	C2024	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2051	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ	C2025	K28179001	Ceramic CAP.		50V	1000pF
R2052	J02225272	Carbon Film RES.	1/6W	2.7k ohm	UJ	C2026	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2053	J02225272	Carbon Film RES.	1/6W	2.7k ohm	UJ	C2027	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2054	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ	C2028	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2055	J01225273	Carbon Film RES.	1/6W	27k ohm	PJ	C2029	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2056	J01225182	Carbon Film RES.	1/6W	1.8k ohm	PJ	C2030	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2057	J02225152	Carbon Film RES.	1/6W	1.5k ohm	UJ	C2031	K12171102	Ceramic CAP.	E	50V	1000pF
R2058	J01225103	Carbon Film RES.	1/6W	10k ohm	PJ	C2032	K00179001	Ceramic CAP.	SL	50V	0.5pF
R2059	J01225221	Carbon Film RES.	1/6W	220 ohm	PJ	C2033	K00172030	Ceramic CAP.	SL	50V	3pF
R2060	J01225221	Carbon Film RES.	1/6W	220 ohm	PJ	C2034	K12171102	Ceramic CAP.	E	50V	1000pF
R2061	J01225221	Carbon Film RES.	1/6W	220 ohm	PJ	C2035	K12171102	Ceramic CAP.	E	50V	1000pF
R2062	J02225221	Carbon Film RES.	1/6W	220 ohm	UJ	C2036	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2063	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ	C2037	K00175101	Ceramic CAP.	SL	50V	100pF
R2064	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ	C2038	K00173100	Ceramic CAP.	SL	50V	10pF
R2065	J02225471	Carbon Film RES.	1/6W	470 ohm	UJ	C2039	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2066	J02225221	Carbon Film RES.	1/6W	220 ohm	UJ	C2040	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2067	J02225221	Carbon Film RES.	1/6W	220 ohm	UJ	C2041	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2068	J02225221	Carbon Film RES.	1/6W	220 ohm	UJ	C2042	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2075	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ	C2043	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2076	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ	C2044	K40129004	AL. Electro. CAP.		16V	10uF
R2077	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ						
R2078	J01225682	Carbon Film RES.	1/6W	6.8k ohm	PJ	C2045	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2079	J01225182	Carbon Film RES.	1/6W	1.8k ohm	UJ	C2046	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2080	J01225272	Carbon Film RES.	1/6W	2.7k ohm	UJ	C2047	K10176561	Ceramic CAP.	B	50V	560pF
R2081	J01225101	Carbon Film RES.	1/6W	100 ohm	UJ	C2048	K10176271	Ceramic CAP.	B	50V	270pF
R2082	J02225152	Carbon Film RES.	1/6W	1.5k ohm	UJ	C2049	K10176102	Ceramic CAP.	B	50V	1000pF
R2083	J01225332	Carbon Film RES.	1/6W	3.3k ohm	PJ	C2050	K10176101	Ceramic CAP.	B	50V	100pF
R2084	J02225223	Carbon Film RES.	1/6W	22k ohm	UJ	C2051	K10176681	Ceramic CAP.	B	50V	680pF
R2085	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ	C2052	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2086	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ	C2053	K13179014	Ceramic CAP.	F	50V	0.0047uF
R2087	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ	C2054	K00175270	Ceramic CAP.	SL	50V	27pF
R2088	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ	C2055	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2089	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ	C2056	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2090	J02225223	Carbon Film RES.	1/6W	22k ohm	UJ	C2057	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2091	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ	C2058	K12171102	Ceramic CAP.	E	50V	1000pF
R2092	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ	C2059	K12171102	Ceramic CAP.	E	50V	1000pF
R2093	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ	C2060	K40129008	AL. Electro. CAP.		16V	33uF
R2094	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ						
R2095	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ	C2061	K12171102	Ceramic CAP.	E	50V	1000pF
R2096	J02225223	Carbon Film RES.	1/6W	22k ohm	UJ	C2062	K02179001	Ceramic CAP.	CH	50V	1pF
R2097	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ	C2063	K05173080	Ceramic CAP.	RH	50V	8pF
R2098	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ	C2064	K02175270	Ceramic CAP.	CH	50V	27pF
R2099	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ	C2065	K02175150	Ceramic CAP.	CH	50V	15pF
R2100	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ	C2066	K06175220	Ceramic CAP.	UJ	50V	22pF
R2101	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ	C2067	K02173100	Ceramic CAP.	CH	50V	10pF
R2102	J02225223	Carbon Film RES.	1/6W	22k ohm	UJ	C2068	K40179013	AL. Electro. CAP.		50V	1uF
R2103	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ						
R2104	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ	C2069	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2105	J02225153	Carbon Film RES.	1/6W	15k ohm	UJ	C2070	K40129008	AL. Electro. CAP.		16V	33uF
R2106	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ						
R2107	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ	C2071	K28129001	Ceramic CAP.	Y	16V	0.01uF
R2108	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ	C2072	K19149017	Ceramic CAP.		25V	0.022uF
R2109	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ	C2073	K19149019	Ceramic CAP.		25V	0.033uF
R2110	J02225471	Carbon Film RES.	1/6W	470 ohm	UJ	C2074	K40129008	AL. Electro. CAP.		16V	33uF
R2111	J02225681	Carbon Film RES.	1/6W	680 ohm	UJ						
R2112	J02225471	Carbon Film RES.	1/6W	470 ohm	UJ	C2075	K10176101	Ceramic CAP.	B	50V	100pF
R2113	J02225100	Carbon Film RES.	1/6W	10 ohm	UJ	C2076	K10176101	Ceramic CAP.	B	50V	100pF
R2114	J02225560	Carbon Film RES.	1/6W	56 ohm	UJ	C2077	K10176101	Ceramic CAP.	B	50V	100pF
R2116	J02225471	Carbon Film RES.	1/6W	470 ohm	UJ	C2078	K19149005	Ceramic CAP.		25V	0.0022uF
R2120	J01225560	Carbon Film RES.	1/6W	56 ohm	PJ	C2079	K12171102	Ceramic CAP.	E	50V	1000pF
TH2001	G9090008	Thermistor		11-2102-2		C2080	K28129001	Ceramic CAP.	Y	16V	0.01uF
						C2082	K28129001	Ceramic CAP.	Y	16V	0.01uF
						C2084	K12171102	Ceramic CAP.	E	50V	1000pF
						C2085	K12171102	Ceramic CAP.	E	50V	1000pF
						C2086	K02179001	Ceramic CAP.	CH	50V	1pF
						C2087	K02172020	Ceramic CAP.	CH	50V	2pF
						C2101	K10176101	Ceramic CAP.	B	50V	100pF
						C2102	K10176101	Ceramic CAP.	B	50V	100pF
						C2103	K10176101	Ceramic CAP.	B	50V	100pF
						C2104	K06179007	Ceramic CAP.	UJ	50V	36pF
						C2105	K06175390	Ceramic CAP.	UJ	50V	39pF
						C2106	K40129004	AL. Electro. CAP.		16V	10uF

# PARTS LIST

T1020	L0020788A	Coil				Q2007	G3304580C	Transistor	2SC458C	
T1021	L0020788A	Coil				Q2008	G3304580C	Transistor	2SC458C	
RL1001	M1190056	Relay	FBR21D12 (DC12V)			Q2009	G1090012	IC	SN16913P	
S1001	N6090033	Slide Switch				Q2010	G3304580C	Transistor	2SC458C	
S1002	N6090033	Slide Switch				Q2011	G3304580C	Transistor	2SC458C	
						Q2012	G1090012	IC	SN16913P	
						Q2013	G1090838	IC	M54459L	
						Q2014	G1090280	IC	uPD4013BC	
						Q2015	G3304580C	Transistor	2SC458C	
						Q2016	G3305350B	Transistor	2SC535B	
						Q2017	G3801921G	Transistor	2SK192AGR	
						Q2018	G1090834	IC	CX-1925B	
						Q2019	G3801840Y	FET	2SK184Y	
						Q2020	G3307320B	Transistor	2SC732TMBL	
						Q2021	G1090101	IC	uPC1037H	
						Q2022	G3305350B	Transistor	2SC535B	
						Q2024	G1090834	IC	CX-7925B	
						Q2025	G3304580C	Transistor	2SC458C	
						Q2026	G3801840Y	FET	2SK184Y	
						Q2027	G3307320B	Transistor	2SC732TMBL	
						Q2028	G3305350B	Transistor	2SC535B	
						Q2029	G3305350B	Transistor	2SC535B	
						Q2030	G3305350B	Transistor	2SC535B	
						Q2031	G3305350B	Transistor	2SC535B	
						Q2032	G3305350B	Transistor	2SC535B	
						Q2034	G3320530	Transistor	2SC2053	
Q8101	G4800740L	FET	3SK74L							
Q8102	G3803027Y	FET	2SK302Y TE85R							
Q8103	G3330527F	Transistor	2SC3052-T14-2F							
Q8104	G3330527F	Transistor	2SC3052-T14-2F							
D8101	G2090244	Diode	1SS106							
D8102	G2090244	Diode	1SS106							
D8103	G2070009	Diode	1SS184 TE85R							
R8101	J24205103	RES. Chip	1/10W 10k ohm							
R8102	J24205473	RES. Chip	1/10W 47k ohm							
R8103	J24205101	RES. Chip	1/10W 100 ohm							
R8104	J24205153	RES. Chip	1/10W 15k ohm							
R8105	J24205101	RES. Chip	1/10W 100 ohm							
R8106	J24205104	RES. Chip	1/10W 100k ohm							
R8108	J24205101	RES. Chip	1/10W 100 ohm							
R8109	J24205102	RES. Chip	1/10W 1k ohm							
R8110	J24205222	RES. Chip	1/10W 2.2k ohm							
R8111	J24205223	RES. Chip	1/10W 22k ohm							
R8112	J24205102	RES. Chip	1/10W 1k ohm							
R8113	J24205224	RES. Chip	1/10W 220k ohm							
R8114	J24205472	RES. Chip	1/10W 4.7k ohm							
R8115	J24205472	RES. Chip	1/10W 4.7k ohm							
R8116	J24205000	RES. Chip	1/10W 0 ohm							
C8101	K22170235	CAP. Chip	CH 50V 100pF							
C8102	K22171004	CAP. Chip	F 50V 0.01uF							
C8103	K22171004	CAP. Chip	F 50V 0.01uF				X2001	H0102853	XTAL	HC-48/U 38.840MHz
C8104	K22171004	CAP. Chip	F 50V 0.01uF				X2002	H0102852	XTAL	HC-48/U 8.2165MHz
C8105	K22171004	CAP. Chip	F 50V 0.01uF				X2003	H0102851	XTAL	HC-48/U 8.2135MHz
C8106	K22170219	CAP. Chip	CH 50V 22pF				X2004	H0102850	XTAL	HC-48/U 5.400MHz
C8107	K22171004	CAP. Chip	F 50V 0.01uF							
C8108	K22170243	CAP. Chip	CH 50V 220pF				CF2001	H3900390	Ceramic Filter	SFT-5.74MA
C8109	K22170243	CAP. Chip	CH 50V 220pF							
C8110	K40129004	AL. Electro. CAP.	16V 10uF				R2001	J02225472	Carbon Film RES.	1/6W 4.7k ohm UJ
C8111	K40129004	AL. Electro. CAP.	16V 10uF				R2002	J02225472	Carbon Film RES.	1/6W 4.7k ohm UJ
C8112	K22171004	CAP. Chip	F 50V 0.01uF				R2003	J02225101	Carbon Film RES.	1/6W 100 ohm UJ
C8113	K40129004	AL. Electro. CAP.	16V 10uF				R2004	J02225471	Carbon Film RES.	1/6W 470 ohm UJ
C8114	K22170235	CAP. Chip	CH 50V 100pF				R2005	J02225154	Carbon Film RES.	1/6W 150k ohm UJ
C8115	K22171004	CAP. Chip	F 50V 0.01uF				R2006	J02225101	Carbon Film RES.	1/6W 100 ohm UJ
L8101	L1190189	M. RFC					R2007	J02225471	Carbon Film RES.	1/6W 470 ohm UJ
T8101	L00221199	Coil		8.20MHz			R2008	J02225683	Carbon Film RES.	1/6W 68k ohm UJ
T8102	L00221199	Coil		8.20MHz			R2009	J02225470	Carbon Film RES.	1/6W 47 ohm UJ
J8101	P0090481	Connector					R2010	J02225101	Carbon Film RES.	1/6W 100 ohm UJ
							R2011	J02225103	Carbon Film RES.	1/6W 10k ohm UJ
							R2012	J02225101	Carbon Film RES.	1/6W 100 ohm UJ
							R2013	J02225101	Carbon Film RES.	1/6W 100 ohm UJ
							R2014	J02225472	Carbon Film RES.	1/6W 4.7k ohm UJ
							R2015	J02225472	Carbon Film RES.	1/6W 4.7k ohm UJ
							R2016	J02225102	Carbon Film RES.	1/6W 1k ohm UJ
							R2017	J02225223	Carbon Film RES.	1/6W 22k ohm UJ
							R2018	J02225103	Carbon Film RES.	1/6W 10k ohm UJ
							R2019	J02225102	Carbon Film RES.	1/6W 1k ohm UJ
							R2020	J02225683	Carbon Film RES.	1/6W 68k ohm UJ
							R2021	J01225470	Carbon Film RES.	1/6W 47 ohm PJ
							R2022	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
							R2023	J02225101	Carbon Film RES.	1/6W 100 ohm UJ
							R2024	J02225223	Carbon Film RES.	1/6W 22k ohm UJ
							R2025	J02225103	Carbon Film RES.	1/6W 10k ohm UJ
							R2026	J01225470	Carbon Film RES.	1/6W 47 ohm UJ
							R2027	J02225471	Carbon Film RES.	1/6W 470 ohm UJ
							R2028	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
							R2029	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
							R2030	J02225471	Carbon Film RES.	1/6W 470 ohm UJ
							R2031	J02225470	Carbon Film RES.	1/6W 47 ohm UJ
							R2032	J02225223	Carbon Film RES.	1/6W 22k ohm UJ
							R2033	J02225103	Carbon Film RES.	1/6W 10k ohm UJ
							R2034	J01225681	Carbon Film RES.	1/6W 680 ohm PJ
							R2035	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
							R2036	J02225472	Carbon Film RES.	1/6W 4.7k ohm UJ

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C1160	K00175220	Ceramic CAP.	SL	50V	22pF	C1235	K40179001	AL. Electro. CAP.	50V	1uF
C1161	K40129004	AL. Electro. CAP.		16V	10uF	C1236	K40179001	AL. Electro. CAP.	50V	1uF
C1162	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1237	K40179001	AL. Electro. CAP.	50V	1uF
C1163	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1238	K40129004	AL. Electro. CAP.	16V	10uF
C1164	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1239	K19149025	Ceramic CAP.	25V	0.1uF
C1165	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1240	K13179009	Ceramic CAP.	F	50V 0.047uF
C1166	K28129001	Ceramic CAP.	Y	16V	0.01uF	CB1001	K80000013	CAP. Block	50V	0.1uFx7
C1167	K13179009	Ceramic CAP.	F	50V	0.047uF	L1001	L1190227	M. RFC		560uH
C1168	K28129001	Ceramic CAP.	Y	16V	0.01uF	L1002	L0021221	Coil		0.17uH
C1169	K28129001	Ceramic CAP.	Y	16V	0.01uF	L1003	L0021222	Coil		0.24uH
C1170	K28129001	Ceramic CAP.	Y	16V	0.01uF	L1004	L1190220	M. RFC		150uH
C1171	K28179001	Ceramic CAP.	B	50V	1000pF	L1006	L1190210	M. RFC		22uH
C1172	K28179001	Ceramic CAP.	B	50V	1000pF	L1008	L1190210	M. RFC		22uH
C1173	K28129001	Ceramic CAP.	Y	16V	0.01uF	L1009	L1190189	M. RFC		1mH
C1174	K00175470	Ceramic CAP.	SL	50V	47pF	L1010	L1190209	M. RFC		18uF
C1175	K00172020	Ceramic CAP.	SL	50V	2pF	L1011	L1190208	M. RFC		15uF
C1176	K00175470	Ceramic CAP.	SL	50V	47pF	L1012	L1190205	M. RFC		6.8uF
C1177	K28179001	Ceramic CAP.	B	50V	1000pF	L1013	L1190208	M. RFC		15uF
C1178	K12171102	Ceramic CAP.	E	50V	1000pF	L1014	L1190209	M. RFC		18uF
C1179	K00175120	Ceramic CAP.	SL	50V	12pF	L1015	L1190207	M. RFC		12uF
C1180	K19149021	Ceramic CAP.		25V	0.047uF	L1016	L1190206	M. RFC		8.2uF
C1181	K19149025	Ceramic CAP.		25V	0.1uF	L1017	L1190202	M. RFC		3.9uF
C1182	K19149021	Ceramic CAP.		25V	0.047uF	L1018	L1190206	M. RFC		8.2uF
C1183	K50177223	Film CAP.		50V	0.022uF	L1019	L1190207	M. RFC		12uF
C1184	K50177223	Film CAP.		50V	0.022uF	L1020	L1190205	M. RFC		6.8uF
C1185	K50177223	Film CAP.		50V	0.022uF	L1021	L1190203	M. RFC		4.7uF
C1186	K40149001	AL. Electro. CAP.		25V	4.7uF	L1022	L1190199	M. RFC		2.2uF
C1187	K40129012	AL. Electro. CAP.			16V 10uF	L1023	L1190203	M. RFC		4.7uF
C1188	K50170014	Film CAP.			50V 0.01uF	L1024	L1190205	M. RFC		6.8uF
C1190	K13179009	Ceramic CAP.	F	50V	0.047uF	L1025	L1190200	M. RFC		2.7uF
C1191	K19149021	Ceramic CAP.		25V	0.047uF	L1026	L1190202	M. RFC		3.9uF
C1192	K19149003	Ceramic CAP.		25V	1500pF	L1027	L1190195	M. RFC		0.82uF
C1193	K19149025	Ceramic CAP.		25V	0.1uF	L1028	L1190202	M. RFC		3.9uF
C1194	K13179009	Ceramic CAP.	F	50V	0.047uF	L1029	L1190200	M. RFC		2.7uF
C1195	K13179009	Ceramic CAP.	F	50V	0.047uF	L1030	L1190198	M. RFC		1.8uF
C1196	K70167224	Tantalum CAP.		40V	0.22uF	L1031	L1190199	M. RFC		2.2uF
C1197	K28129001	Ceramic CAP.	Y	16V	0.01uF	L1032	L1190192	M. RFC		0.47uF
C1198	K28129001	Ceramic CAP.	Y	16V	0.01uF	L1033	L1190199	M. RFC		2.2uF
C1200	K40129012	AL. Electro. CAP.			16V 10uF	L1034	L1190198	M. RFC		1.8uF
C1201	K40179005	AL. Electro. CAP.			50V 0.47uF	L1035	L1190189	M. RFC		1mH
C1202	K40149011	AL. Electro. CAP.			25V 4.7uF	L1036	L1190187	M. RFC		1.5uH
C1203	K28129001	Ceramic CAP.	Y	16V	0.01uF	L1037	L1190220	M. RFC		150uH
C1204	K28179001	Ceramic CAP.	B	50V	1000pF	L1038	L1190220	M. RFC		150uH
C1205	K28179001	Ceramic CAP.	B	50V	1000pF	L1039	L1190040	M. RFC		1mH
C1206	K28179001	Ceramic CAP.	B	50V	1000pF	L1040	L1190220	M. RFC		150uH
C1207	K28179001	Ceramic CAP.	B	50V	1000pF	L1041	L1190188	M. RFC		0.22uH
C1208	K22170817	CAP. Chip	B	50V	0.01uF	L1042	L1190090	M. RFC		1mH
C1209	K19149021	Ceramic CAP.		25V	0.047uF	L1043	L1190218	M. RFC		100uH
C1210	K40129007	AL. Electro. CAP.			16V 100uF	L1044	L1190204	M. RFC		5.6uH
C1211	K00175471	Ceramic CAP.	SL	50V	470pF	L1045	L1190214	M. RFC		47uH
C1212	K40129006	AL. Electro. CAP.			16V 470uF	L1046	L1190218	M. RFC		100uH
C1213	K13179009	Ceramic CAP.	F	50V	0.047uF	L1047	L1190123	M. RFC		3.9mH
C1214	K22170817	CAP. Chip	B	50V	0.01uF	L1048	L1190040	M. RFC		1mH
C1215	K40129004	AL. Electro. CAP.			16V 10uF	L1049	L1190123	M. RFC		3.9mH
C1216	K28129001	Ceramic CAP.	Y	16V	0.01uF	L1050	L1190218	M. RFC		100uH
C1217	K13179009	Ceramic CAP.	F	50V	0.047uF	L1052	L1190220	M. RFC		150uH
C1218	K22171008	CAP. Chip	F	50V	0.047uF	L1053	L1190037	M. RFC		150uH
C1219	K22171008	CAP. Chip	F	50V	0.047uF	L1054	L1190190	M. RFC		0.27uH
C1220	K00175510	Ceramic CAP.	SL	50V	51pF	L1056	L1190189	M. RFC		1mH
C1221	K00175510	Ceramic CAP.	SL	50V	51pF	L1057	L1190190	M. RFC		0.27uH
C1222	K28129001	Ceramic CAP.	Y	16V	0.01uF	L1058	L1190148	M. RFC		10uH
C1223	K13179009	Ceramic CAP.	F	50V	0.047uF	T1001	L0020788A	Coil		
C1224	K40129016	AL. Electro. CAP.			16V 22uF	T1002	L0021351	Coil		
C1225	K28129001	Ceramic CAP.	Y	16V	0.01uF	T1003	L0020225	Coil		47.1MHz
C1226	K19149023	Ceramic CAP.		25V	0.068uF	T1004	L0020224	Coil		47.1MHz
C1227	K40129009	AL. Electro. CAP.			50V 2.2uF	T1005	L0020482	Coil		47.0MHz
C1228	K40179001	AL. Electro. CAP.			50V 1uF	T1006	L0020858	Coil		48.0MHz
C1229	K40129013	AL. Electro. CAP.			16V 22uF	T1007	L0021199	Coil		8.2MHz
C1230	K40129012	AL. Electro. CAP.			16V 10uF	T1008	L0021199	Coil		8.2MHz
C1231	K00175470	Ceramic CAP.	SL	50V	47pF	T1009	L0021199	Coil		8.2MHz
C1232	K00175560	Ceramic CAP.	SL	50V	56pF	T1010	L0021199	Coil		8.2MHz
C1233	K28179001	Ceramic CAP.	B	50V	1000pF	T1011	L0021199	Coil		47.1MHz
C1234	K28129001	Ceramic CAP.	Y	16V	0.01uF	T1012	L0021199	Coil		47.1MHz
						T1013	L0021192	Coil		47.1MHz
						T1014	L0021199	Coil		47.1MHz
						T1015	L0021199	Coil		47.1MHz
						T1016	L0021195	Coil		8.21MHz
						T1017	L0021225	Coil		47.1MHz
						T1018	L0021225	Coil		47.1MHz
						T1019	L0021225	Coil		47.1MHz

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C1001	K19149025	Ceramic CAP.		25V	0.1uF	C1089	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1002	K13179009	Ceramic CAP.	F	50V	0.047uF	C1090	K19149025	Ceramic CAP.		25V	0.1uF
C1003	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1091	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1004	K00175680	Ceramic CAP.	SL	50V	68pF	C1092	K12171102	Ceramic CAP.	E	50V	1000pF
C1005	K00175820	Ceramic CAP.	SL	50V	82pF	C1093	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1006	K00175151	Ceramic CAP.	SL	50V	150pF	C1094	K19149025	Ceramic CAP.		25V	0.1uF
C1007	K00175220	Ceramic CAP.	SL	50V	22pF	C1095	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1008	K13179009	Ceramic CAP.	F	50V	0.047uF	C1097	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1009	K00179011	Ceramic CAP.	SL	50V	62pF	C1098	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1010	K19149025	Ceramic CAP.		25V	0.1uF	C1099	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1011	K19149025	Ceramic CAP.		25V	0.1uF	C1100	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1012	K40129004	AL. Electro. CAP.		16V	10uF	C1102	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1013	K19149021	Ceramic CAP.		25V	0.047uF	C1103	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1014	K00175221	Ceramic CAP.	SL	50V	220pF	C1104	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1017	K00175511	Ceramic CAP.	SL	50V	510pF	C1105	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1019	K00175221	Ceramic CAP.	SL	50V	220pF	C1106	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1020	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1107	K00173100	Ceramic CAP.	SL	50V	10pF
C1021	K40129004	AL. Electro. CAP.		16V	10uF	C1108	K40179006	AL. Electro. CAP.		50V	2.2uF
C1022	K00175151	Ceramic CAP.	SL	50V	150pF	C1109	K28179001	Ceramic CAP.	B	50V	1000pF
C1023	K13179009	Ceramic CAP.	F	50V	0.047uF	C1110	K00175101	Ceramic CAP.	SL	50V	100pF
C1024	K00175181	Ceramic CAP.	SL	50V	180pF	C1111	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1025	K00175471	Ceramic CAP.	SL	50V	470pF	C1112	K00175101	Ceramic CAP.	SL	50V	100pF
C1026	K00175181	Ceramic CAP.	SL	50V	180pF	C1113	K40129013	AL. Electro. CAP.		16V	22uF
C1027	K00175151	Ceramic CAP.	SL	50V	150pF	C1114	K00175221	Ceramic CAP.	SL	50V	220pF
C1028	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1115	K50170015	Film CAP.		50V	0.022uF
C1029	K40129004	AL. Electro. CAP.		16V	10uF	C1116	K40179001	AL. Electro. CAP.		50V	1uF
C1030	K00175680	Ceramic CAP.	SL	50V	68pF	C1117	K13179009	Ceramic CAP.	F	50V	0.047uF
C1031	K13179009	Ceramic CAP.	F	50V	0.047uF	C1118	K70147155	Tantalum CAP.		25V	1.5uF
C1032	K00175121	Ceramic CAP.	SL	50V	120pF	C1119	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1033	K00175221	Ceramic CAP.	SL	50V	220pF	C1120	K12171102	Ceramic CAP.	E	50V	1000pF
C1034	K00175121	Ceramic CAP.	SL	50V	120pF	C1121	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1035	K00175680	Ceramic CAP.	SL	50V	68pF	C1122	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1036	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1123	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1037	K40129004	AL. Electro. CAP.		16V	10uF	C1124	K40179001	AL. Electro. CAP.		50V	1uF
C1038	K00175390	Ceramic CAP.	SL	50V	39pF	C1125	K40129012	AL. Electro. CAP.		16V	10uF
C1039	K13179009	Ceramic CAP.	F	50V	0.047uF	C1126	K40129012	AL. Electro. CAP.		16V	10uF
C1040	K00175680	Ceramic CAP.	SL	50V	68pF	C1127	K40149011	AL. Electro. CAP.		25V	4.7uF
C1041	K00175151	Ceramic CAP.	SL	50V	150pF	C1128	K50170007	Film CAP.		50V	0.001uF
C1042	K00175680	Ceramic CAP.	SL	50V	68pF	C1129	K50170009	Film CAP.		50V	0.0022uF
C1043	K00175390	Ceramic CAP.	SL	50V	39pF	C1130	K50170011	Film CAP.		50V	0.0047uF
C1044	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1131	K40129012	AL. Electro. CAP.		16V	10uF
C1045	K40129004	AL. Electro. CAP.		16V	10uF	C1132	K40129012	AL. Electro. CAP.		16V	10uF
C1046	K00175330	Ceramic CAP.	SL	50V	33pF	C1133	K50177222	Film CAP.		50V	0.0022uF
C1047	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1134	K40149011	AL. Electro. CAP.		25V	4.7uF
C1048	K00175270	Ceramic CAP.	SL	50V	27pF	C1135	K40129012	AL. Electro. CAP.		16V	10uF
C1049	K00175121	Ceramic CAP.	SL	50V	120pF	C1136	K40179005	AL. Electro. CAP.		50V	0.47uF
C1050	K00175270	Ceramic CAP.	SL	50V	27pF	C1137	K28179001	Ceramic CAP.	B	50V	1000pF
C1051	K00175330	Ceramic CAP.	SL	50V	33pF	C1138	K40129012	AL. Electro. CAP.		16V	10uF
C1052	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1142	K28179001	Ceramic CAP.	B	50V	1000pF
C1053	K40129004	AL. Electro. CAP.		16V	10uF	C1143	K40179013	AL. Electro. CAP.		50V	1uF
C1054	K00173080	Ceramic CAP.	SL	50V	8pF	C1144	K28179001	Ceramic CAP.	B	50V	1000pF
C1055	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1145	K40129012	AL. Electro. CAP.		16V	10uF
C1056	K00175180	Ceramic CAP.	SL	50V	18pF	C1146	K28129001	Ceramic CAP.	B	16V	0.01uF
C1057	K00175101	Ceramic CAP.	SL	50V	100pF	C1147	K28129001	Ceramic CAP.	B	16V	1000pF
C1058	K00175180	Ceramic CAP.	SL	50V	18pF	C1148	K40129012	AL. Electro. CAP.		16V	10uF
C1059	K00175150	Ceramic CAP.	SL	50V	15pF	C1149	K40149011	AL. Electro. CAP.		25V	4.7uF
C1060	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1150	K40149011	AL. Electro. CAP.		25V	4.7uF
C1061	K40129004	AL. Electro. CAP.		16V	10uF	C1151	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1062	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1152	K40129013	AL. Electro. CAP.		16V	22uF
C1063	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1153	K28179001	Ceramic CAP.	B	50V	1000pF
C1064	K13179009	Ceramic CAP.	F	50V	0.047uF	C1154	K40149011	AL. Electro. CAP.		25V	4.7uF
C1065	K00173100	Ceramic CAP.	SL	50V	10pF	C1155	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1066	K13179009	Ceramic CAP.	F	50V	0.047uF	C1156	K00175220	Ceramic CAP.	Y	50V	22pF
C1067	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1157	K40149011	AL. Electro. CAP.		25V	4.7uF
C1071	K28129001	Ceramic CAP.	Y	16V	0.01uF	C1158	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1073	K13179009	Ceramic CAP.	F	50V	0.047uF	C1159	K28129001	Ceramic CAP.	Y	16V	0.01uF
C1074	K00175470	Ceramic CAP.	SL	50V	47pF						
C1075	K00175101	Ceramic CAP.	SL	50V	100pF						
C1076	K28129001	Ceramic CAP.	Y	16V	0.01uF						
C1077	K13179009	Ceramic CAP.	F	50V	0.047uF						
C1078	K28129001	Ceramic CAP.	Y	16V	0.01uF						
C1079	K22170805	CAP. Chip	B	50V	1000pF						
C1080	K28129001	Ceramic CAP.	Y	16V	0.01uF						
C1081	K28179001	Ceramic CAP.	B	50V	1000pF						
C1082	K22170805	CAP. Chip	B	50V	1000pF						
C1083	K28129001	Ceramic CAP.	Y	16V	0.01uF						
C1085	K00175101	Ceramic CAP.	SL	50V	100pF						
C1087	K00173100	Ceramic CAP.	SL	50V	10pF						
C1088	K19149021	Ceramic CAP.		25V	0.047uF						

# PARTS LIST

R1068	J02225222	Carbon Film RES.	1/6W	2.2k ohm	UJ	R1167	J01225470	Carbon Film RES.	1/6W	47 ohm	PJ
R1069	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ	R1168	J01225103	Carbon Film RES.	1/6W	10k ohm	PJ
R1070	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ	R1169	J01225680	Carbon Film RES.	1/6W	68 ohm	PJ
R1071	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ	R1170	J01225102	Carbon Film RES.	1/6W	1k ohm	PJ
R1072	J02225682	Carbon Film RES.	1/6W	6.8k ohm	UJ	R1172	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ
R1073	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ	R1173	J02225333	Carbon Film RES.	1/6W	33k ohm	UJ
R1074	J02225155	Carbon Film RES.	1/6W	1.5M ohm	UJ	R1174	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1075	J02225103	Carbon Film RES.	1/6W	10 ohm	UJ	R1175	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1076	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ	R1176	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1077	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ	R1177	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1078	J02225473	Carbon Film RES.	1/6W	47k ohm	UJ	R1178	J01225331	Carbon Film RES.	1/6W	330 ohm	PJ
R1079	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ	R1179	J02225224	Carbon Film RES.	1/6W	220k ohm	UJ
R1080	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ	R1180	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ
R1082	J02225152	Carbon Film RES.	1/6W	1.5k ohm	UJ	R1181	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ
R1083	J01225103	Carbon Film RES.	1/6W	10k ohm	PJ	R1182	J01225102	Carbon Film RES.	1/6W	1k ohm	PJ
R1084	J01225682	Carbon Film RES.	1/6W	6.8k ohm	PJ	R1183	J01225681	Carbon Film RES.	1/6W	680 ohm	PJ
R1087	J01225392	Carbon Film RES.	1/6W	3.9k ohm	PJ	R1184	J01225152	Carbon Film RES.	1/6W	1.5k ohm	PJ
R1088	J01225564	Carbon Film RES.	1/6W	560k ohm	PJ	R1185	J02225479	Carbon Film RES.	1/6W	4.7 ohm	UJ
R1089	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ	R1186	J02225181	Carbon Film RES.	1/6W	180 ohm	UJ
R1090	J01225472	Carbon Film RES.	1/6W	4.7k ohm	PJ	R1187	J01225391	Carbon Film RES.	1/6W	390 ohm	PJ
R1091	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ	R1188	J01225102	Carbon Film RES.	1/6W	1k ohm	PJ
R1092	J01225225	Carbon Film RES.	1/6W	2.2M ohm	PJ	R1189	J01225221	Carbon Film RES.	1/6W	220 ohm	PJ
R1094	J01225103	Carbon Film RES.	1/6W	10k ohm	PJ	R1190	J01225103	Carbon Film RES.	1/6W	10k ohm	PJ
R1095	J01225222	Carbon Film RES.	1/6W	2.2k ohm	PJ	R1191	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ
R1096	J01225472	Carbon Film RES.	1/6W	4.7k ohm	PJ	R1192	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ
R1097	J02225223	Carbon Film RES.	1/6W	22k ohm	UJ	R1193	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R1098	J01225471	Carbon Film RES.	1/6W	470 ohm	PJ	R1194	J01225823	Carbon Film RES.	1/6W	82k ohm	PJ
R1099	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ	R1195	J02225562	Carbon Film RES.	1/6W	5.6k ohm	UJ
R1100	J01225102	Carbon Film RES.	1/6W	1k ohm	PJ	R1197	J01225154	Carbon Film RES.	1/6W	150k ohm	PJ
R1101	J01225103	Carbon Film RES.	1/6W	10k ohm	PJ	R1198	J02225473	Carbon Film RES.	1/6W	47k ohm	UJ
R1102	J01225682	Carbon Film RES.	1/6W	6.8k ohm	PJ	R1200	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R1103	J01225682	Carbon Film RES.	1/6W	6.8k ohm	PJ	R1201	J02225105	Carbon Film RES.	1/6W	1M ohm	UJ
R1104	J02225682	Carbon Film RES.	1/6W	6.8k ohm	UJ	R1202	J02225333	Carbon Film RES.	1/6W	33k ohm	UJ
R1105	J01225154	Carbon Film RES.	1/6W	150k ohm	PJ	R1203	J01225223	Carbon Film RES.	1/6W	22k ohm	PJ
R1106	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ	R1204	J01225334	Carbon Film RES.	1/6W	330k ohm	PJ
R1107	J01225102	Carbon Film RES.	1/6W	1k ohm	PJ	R1206	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ
R1108	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ	R1208	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1109	J01225223	Carbon Film RES.	1/6W	22k ohm	PJ	R1209	J02225562	Carbon Film RES.	1/6W	5.6k ohm	UJ
R1110	J02225683	Carbon Film RES.	1/6W	68k ohm	UJ	R1210	J02225153	Carbon Film RES.	1/6W	15k ohm	UJ
R1111	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ	R1211	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ
R1112	J02225332	Carbon Film RES.	1/6W	3.3k ohm	UJ	R1212	J01225221	Carbon Film RES.	1/6W	220 ohm	PJ
R1113	J02225220	Carbon Film RES.	1/6W	22 ohm	UJ	R1213	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R1114	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ	R1214	J01225103	Carbon Film RES.	1/6W	10k ohm	PJ
R1115	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ	R1216	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1116	J01225332	Carbon Film RES.	1/6W	3.3k ohm	PJ	R1217	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ
R1117	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ	R1218	J01225823	Carbon Film RES.	1/6W	82k ohm	PJ
R1119	J01225103	Carbon Film RES.	1/6W	10k ohm	PJ	R1219	J02225222	Carbon Film RES.	1/6W	2.2k ohm	UJ
R1120	J01225102	Carbon Film RES.	1/6W	1k ohm	PJ	R1220	J01225103	Carbon Film RES.	1/6W	10k ohm	PJ
R1121	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ	R1221	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ
R1122	J01225223	Carbon Film RES.	1/6W	22k ohm	PJ	R1222	J02225221	Carbon Film RES.	1/6W	220 ohm	UJ
R1123	J01225331	Carbon Film RES.	1/6W	330 ohm	PJ	R1223	J02225221	Carbon Film RES.	1/6W	220 ohm	UJ
R1124	J01225153	Carbon Film RES.	1/6W	15k ohm	PJ	R1224	J02225221	Carbon Film RES.	1/6W	220 ohm	UJ
R1125	J01225222	Carbon Film RES.	1/6W	2.2k ohm	PJ	R1225	J02225221	Carbon Film RES.	1/6W	220 ohm	UJ
R1126	J01225151	Carbon Film RES.	1/6W	150 ohm	PJ	R1226	J01225103	Carbon Film RES.	1/6W	10k ohm	PJ
R1127	J01225221	Carbon Film RES.	1/6W	220 ohm	PJ	R1227	J01225103	Carbon Film RES.	1/6W	10k ohm	PJ
R1130	J02225222	Carbon Film RES.	1/6W	2.2k ohm	UJ	R1230	J20249046	Metal Film RES.	1/4W	8.87k ohm	
R1131	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ	R1231	J20249102	Metal Film RES.	1/4W	1.43k ohm	
R1132	J01225473	Carbon Film RES.	1/6W	47k ohm	PJ	R1233	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ
R1133	J01225473	Carbon Film RES.	1/6W	47k ohm	PJ	R1234	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ
R1134	J01225681	Carbon Film RES.	1/6W	680 ohm	PJ	R1235	J02225473	Carbon Film RES.	1/6W	47k ohm	UJ
R1135	J01225221	Carbon Film RES.	1/6W	220 ohm	PJ	R1236	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R1136	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ	R1237	J01225471	Carbon Film RES.	1/6W	470 ohm	PJ
R1137	J01225102	Carbon Film RES.	1/6W	1k ohm	PJ	R1238	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ
R1138	J01225153	Carbon Film RES.	1/6W	15k ohm	PJ	R1239	J01225473	Carbon Film RES.	1/6W	47k ohm	PJ
R1139	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ	R1240	J01225561	Carbon Film RES.	1/6W	560 ohm	PJ
R1140	J02225222	Carbon Film RES.	1/6W	2.2k ohm	UJ	R1241	J01225683	Carbon Film RES.	1/6W	68k ohm	PJ
R1141	J01225102	Carbon Film RES.	1/6W	1k ohm	PJ	R1242	J01225102	Carbon Film RES.	1/6W	1k ohm	PJ
R1142	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ	R1243	J02225152	Carbon Film RES.	1/6W	1.5k ohm	UJ
R1143	J01225102	Carbon Film RES.	1/6W	1k ohm	PJ	R1244	J01225221	Carbon Film RES.	1/6W	220 ohm	PJ
R1144	J01225223	Carbon Film RES.	1/6W	22k ohm	PJ	R1245	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ
R1145	J01225102	Carbon Film RES.	1/6W	1k ohm	PJ	R1246	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ
R1146	J01225221	Carbon Film RES.	1/6W	220 ohm	PJ						
R1147	J01225331	Carbon Film RES.	1/6W	330 ohm	PJ	VR1001	J51745472	POT.	B	4.7k ohm	
R1148	J02225272	Carbon Film RES.	1/6W	2.7k ohm	UJ	VR1002	J51745103	POT.	B	10k ohm	
R1149	J01225681	Carbon Film RES.	1/6W	680 ohm	PJ	VR1003	J51745105	POT.	B	1M ohm	
R1150	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ	VR1004	J51745102	POT.	B	1k ohm	
R1151	J02225221	Carbon Film RES.	1/6W	220 ohm	UJ	VR1005	J51745474	POT.	B	470k ohm	
R1152	J01225472	Carbon Film RES.	1/6W	4.7k ohm	PJ	VR1006	J51745103	POT.	B	10k ohm	
R1153	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ	VR1007	J51745103	POT.	B	10k ohm	
R1155	J02225332	Carbon Film RES.	1/6W	3.3k ohm	UJ	VR1008	J51723103	POT.	B	10k ohm	
R1157	J01225224	Carbon Film RES.	1/6W	220k ohm	PJ	VR1009	J51745472	POT.	B	4.7k ohm	
R1158	J01225471	Carbon Film RES.	1/6W	470 ohm	PJ	VR1010	J51745103	POT.	B	10k ohm	
R1159	J01225471	Carbon Film RES.	1/6W	470 ohm	PJ	VR1011	J51745474	POT.	B	470k ohm	
R1160	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ	VR1012	J51745103	POT.	B	10k ohm	
R1161	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ	VR1013	J51745474	POT.	B	470k ohm	
R1162	J01225223	Carbon Film RES.	1/6W	22k ohm	PJ	VR1014	J51745471	POT.	B	470 ohm	
R1163	J02225221	Carbon Film RES.	1/6W	220 ohm	PJ						

# PARTS LIST

Q1041	G1090297	IC	uPD4094BC	D1081	G2090408	Diode	ISS270
Q1042	G1090297	IC	uPD4094BC	D1082	G2060004	Diode	ISS270TJ
Q1043	G3090078	Transistor	DTA143ES	D1083	G2060004	Diode	ISS270TJ
Q1044	G3406691	Transistor	2SD669A	D1084	G2060004	Diode	ISS270TJ
Q1045	G1090837	IC	IR3M03A	D1085	G2060004	Diode	ISS270TJ
Q1046	G3090074	Transistor	BA1A4M	D1086	G2090002	Diode	10D10
Q1047	G3304580B	Transistor	2SC458B	D1087	G2060004	Diode	ISS270TJ
Q1048	G3090077	Transistor	BA1L3Z	D1088	G2090408	Diode	ISS270
Q1049	G3304580B	Transistor	2SC458B	D1089	G2090408	Diode	ISS270
				D1090	G2090340	Diode	ISS83
D1001	G2090340	Diode	ISS83	D1091	G2090408	Diode	ISS270
D1002	G2090340	Diode	ISS83	D1092	G2090408	Diode *	ISS270
D1003	G2090340	Diode	ISS83	D1093	G2060004	Diode	ISS270TJ
D1004	G2090340	Diode	ISS83	D1094	G2090408	Diode	ISS270
D1005	G2090340	Diode	ISS83	D1097	G2060004	Diode	ISS270TJ
D1006	G2090340	Diode	ISS83	D1098	G2060004	Diode	ISS270TJ
D1007	G2090340	Diode	ISS83	D1099	G2090226	Diode	HZ4C3
D1008	G2090340	Diode	ISS83	D1100	G2090408	Diode	ISS270
D1009	G2090340	Diode	ISS83	D1101	G2090408	Diode	ISS270
D1010	G2090340	Diode	ISS83				
D1011	G2090340	Diode	ISS83	TH1001	G9090010	Thermistor	112302-2
D1012	G2090340	Diode	ISS83	TH1002	G9090008	Thermistor	112102-2
D1013	G2090340	Diode	ISS83	TH1003	G9090015	Thermistor	SDT-100
D1014	G2090340	Diode	ISS83	TH1004	G9090039	Thermistor	112152-2
D1015	G2090340	Diode	ISS83				
D1016	G2090340	Diode	ISS83	XF1001	H1102090	XTAL Filter	47M15AU
D1017	G2090340	Diode	ISS83				
D1018	G2090340	Diode	ISS83	R1001	J01225471	Carbon Film RES.	1/6W 470 ohm PJ
D1019	G2060004	Diode	ISS270TJ	R1002	J01225560	Carbon Film RES.	1/6W 56 ohm PJ
D1021	G2060004	Diode	ISS270TJ	R1003	J01225102	Carbon Film RES.	1/6W 1k ohm UJ
D1022	G2060004	Diode	ISS270TJ	R1004	J01225102	Carbon Film RES.	1/6W 1k ohm PJ
D1023	G2060004	Diode	ISS270TJ	R1005	J01225102	Carbon Film RES.	1/6W 1k ohm PJ
D1024	G2090408	Diode	ISS270	R1006	J01225471	Carbon Film RES.	1/6W 470 ohm PJ
Q1025	G2090244	Diode	ISS106	R1007	J02245471	Carbon Film RES.	1/4W 470 ohm SJ
Q1026	G2090244	Diode	ISS106	R1008	J02245101	Carbon Film RES.	1/6W 100 ohm UJ
Q1027	G2090244	Diode	ISS106	R1009	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
Q1028	G2060004	Diode	ISS270TJ	R1010	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
Q1029	G2060004	Diode	ISS270TJ	R1011	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
Q1031	G2060004	Diode	ISS270TJ	R1012	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
Q1032	G2060004	Diode	ISS270TJ	R1013	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
Q1033	G2060004	Diode	ISS270TJ	R1014	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
Q1034	G2060004	Diode	ISS270TJ	R1015	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
Q1035	G2090244	Diode	ISS106	R1016	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
Q1036	G2090244	Diode	ISS106	R1017	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
Q1037	G2090244	Diode	ISS106	R1018	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
Q1038	G2090244	Diode	ISS106	R1019	J01225121	Carbon Film RES.	1/6W 120 ohm PJ
Q1039	G2090408	Diode	ISS270	R1020	J01225391	Carbon Film RES.	1/6W 390 ohm PJ
Q1040	G2090408	Diode	ISS270	R1022	J01225104	Carbon Film RES.	1/6W 100k ohm PJ
Q1041	G2090408	Diode	ISS270	R1023	J02225104	Carbon Film RES.	1/6W 100k ohm UJ
Q1042	G2060004	Diode	ISS270TJ	R1024	J01225471	Carbon Film RES.	1/6W 470 ohm PJ
Q1044	G2090408	Diode	ISS270	R1025	J01225471	Carbon Film RES.	1/6W 470 ohm PJ
Q1045	G2060004	Diode	ISS270TJ	R1027	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
Q1046	G2060004	Diode	ISS270TJ	R1030	J01225393	Carbon Film RES.	1/6W 39k ohm PJ
Q1047	G2060004	Diode	ISS270TJ	R1031	J01225683	Carbon Film RES.	1/6W 68k ohm PJ
Q1048	G2060004	Diode	ISS270TJ	R1032	J01225104	Carbon Film RES.	1/6W 100k ohm PJ
Q1049	G2060004	Diode	ISS270TJ	R1033	J01225684	Carbon Film RES.	1/6W 680k ohm PJ
Q1050	G2060004	Diode	ISS270TJ	R1034	J01225272	Carbon Film RES.	1/6W 2.7k ohm PJ
Q1051	G2060004	Diode	ISS270TJ	R1035	J01225153	Carbon Film RES.	1/6W 15k ohm PJ
D1052	G2090408	Diode	ISS270	R1036	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
D1053	G2090408	Diode	ISS270	R1037	J01225471	Carbon Film RES.	1/6W 470 ohm PJ
D1054	G2090408	Diode	ISS270	R1038	J01225560	Carbon Film RES.	1/6W 56 ohm PJ
D1055	G2090135	Diode	ND487C2-3R	R1039	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
D1056	G2090340	Diode	ISS83	R1042	J01225682	Carbon Film RES.	1/6W 6.8k ohm PJ
D1057	G2090340	Diode	ISS83	R1043	J01225472	Carbon Film RES.	1/6W 4.7k ohm PJ
D1058	G9090007	Diode	MV12	R1044	J01225331	Carbon Film RES.	1/6W 330 ohm PJ
D1059	G2090229	Diode	HZ7B1	R1045	J02225331	Carbon Film RES.	1/6W 330 ohm UJ
D1060	G2090229	Diode	HZ7B1	R1046	J02225104	Carbon Film RES.	1/6W 100k ohm UJ
D1061	G2060004	Diode	ISS270TJ	R1047	J02225681	Carbon Film RES.	1/6W 680 ohm UJ
D1062	G2060004	Diode	ISS270TJ	R1048	J02225184	Carbon Film RES.	1/6W 180k ohm UJ
D1063	G2060004	Diode	ISS270TJ	R1049	J01225471	Carbon Film RES.	1/6W 470 ohm PJ
D1064	G2090408	Diode	ISS270	R1050	J01225151	Carbon Film RES.	1/6W 150 ohm PJ
D1065	G2060004	Diode	ISS270TJ	R1051	J02225101	Carbon Film RES.	1/6W 100 ohm UJ
D1066	G2090408	Diode	ISS270	R1052	J01225153	Carbon Film RES.	1/6W 15k ohm PJ
D1067	G2090118	Diode	ISS97	R1053	J02225273	Carbon Film RES.	1/6W 27k ohm UJ
D1068	G2060004	Diode	ISS270TJ	R1054	J02225103	Carbon Film RES.	1/6W 10k ohm UJ
D1069	G2090408	Diode	ISS270	R1055	J02225471	Carbon Film RES.	1/6W 470 ohm UJ
D1070	G2060004	Diode	ISS270TJ	R1056	J01225151	Carbon Film RES.	1/6W 150 ohm PJ
D1071	G2060004	Diode	ISS270TJ	R1057	J02225101	Carbon Film RES.	1/6W 100 ohm UJ
D1072	G2090408	Diode	ISS270	R1058	J01225153	Carbon Film RES.	1/6W 15k ohm PJ
D1073	G2090408	Diode	ISS270	R1060	J01225393	Carbon Film RES.	1/6W 39k ohm PJ
D1074	G2090408	Diode	ISS270	R1061	J01225103	Carbon Film RES.	1/6W 10k ohm PJ
D1075	G2090408	Diode *	ISS270	R1062	J01225221	Carbon Film RES.	1/6W 220 ohm PJ
D1076	G2090408	Diode *	ISS270	R1063	J01225221	Carbon Film RES.	1/6W 220 ohm PJ
D1077	G2090408	Diode	ISS270	R1064	J02225101	Carbon Film RES.	1/6W 100 ohm UJ
D1078	G2090408	Diode	ISS270	R1065	J01225153	Carbon Film RES.	1/6W 15k ohm PJ
D1079	G2090408	Diode	ISS270	R1066	J01225333	Carbon Film RES.	1/6W 33k ohm PJ
D1080	G2060004	Diode	ISS270TJ	R1067	J01225683	Carbon Film RES.	1/6W 68k ohm PJ

\*: Version F

# PARTS LIST

**MAIN CHASSIS**

Symbol No.	Part No.	Description	Device
Q1	G1090778	IC	L7809
Q2	G1090294	IC	uPC7808H
VR1	J6280097	Potentiometer	10KA/10kB (AF/SQL)
VR2	J6280098	Potentiometer	10kB/10kB(MIC/DRIVE)
C1	K19149025	Ceramic CAP.	50WV 0.1uF
C2	K13179009	Ceramic CAP. ▲	F 50WV 0.047uF
C3	K10176102	Ceramic CAP.	B 50WV 0.001uF
C4	K13179008	Ceramic CAP.	F 50WV 0.01uF
C5	K19149025	Ceramic CAP.	50WV 0.1uF
L1	L9190010	Ferrite Beads	
L2	L9190047	Ferrite Beads	
SP1	M4090030	Speaker	1.5W 8 ohm
J1	P1090194	Connector (ANT)	
J2	P0090158	Connector (MIC)	
J3	P0090026	Connector (13.8V DC)	
Q9000078	Terminal		
Q9000192	Sarcon		
Q9000125	Insulator		
T9205617	Wire ASSY	P1-P2	
T9205618	Wire ASSY	P3-P4	
T9315504	Wire ASSY	P5-P6	
T9205619	Wire ASSY ▲	P7	
T9205620	Wire ASSY	P8	
T9205621	Wire ASSY	P9	
T9205622	Wire ASSY	P10	
T9205623A	Wire ASSY	P11	
T9205624A	Wire ASSY	P12	
T9205625	Wire ASSY	P13	
T9311301B	Wire ASSY	P14	
T9317811	Wire ASSY	P15	
T9317825	Wire ASSY		
R3510940A	Panel		
R3123790	Filter		
R3123800	Knob (MAIN)		
R3123830	Knob (AF,MIC)		
R6123840	Knob (SQL, DRIVE)		
R3123850A	Knob (CLAR)		
R3123870A	Knob (D LOCK)		
R3123890	Knob (MODE)		
R3123910	Knob (VFO MR)		
R3123930	Knob (VFO M)		
R3123950	Knob (M VFO)		
R3123960	Knob (SPLIT)		
R3123980	Knob (PRIM)		
R3123990	Knob (FAST)		
R3124020A	Knob (POWER)		
R3124030B	Knob (NAR)		
R3124040A	Knob (ATT)		
R3124050A	Knob (NB, MOX)		
R3124190	Ring		
R3804450A	Case Top		
R3804460A	Case Bottom		
R5510950A	Side Trim		
R0510960	Heatsink Cover		
R0510970A	Heatsink Cover		
R4804670A	Heatsink		
R0124060	Fitting		
R3124010	Knob		
R5510951	Side Trim		
R3124800			
R7049015	SP Net		
R3100700	Foot		
R0100690A	Stand		
R7125160	Sponge		
R7125170	Sponge		
R7125230	Press Board		
R7125430	Sponge		
R7125450	Sponge		
R7125460	Sponge		
R7125630	Sponge		
R6125640A	Washer		
R8013580	Name Plate		
R0116420	Ground Lug		
R7125830	Sheet		

**Press Board**

R0125890 Fitting

R7125900 Sponge

R0126000 Clamp

R7125631 Sponge Rubber

R3126040 Rubber Foot

R7126140 Plate

R7126150 Plate

R6100980A Nut

R7126400 Plate

R7126410 Fiber

R7126640 Sheet

R8124070 Nameplate "FT-747SX" •

R8124090 Nameplate "FT-747GX" ▲

R0124080A Motor Holder

R3056970B Radial Fan

M2190004 Motor MDN-7R1 DC13.5V

T9205619 Wire ASSY

**MAIN UNIT**

Symbol No.	Part No.	Description	Device
	F2942000A	Printed Circuit Board	
	C029420AA	PCB with Components (10W: Version F)	
	C029420AB	PCB with Components (100W: Version F)	
	C029420AC	PCB with Components	
	C029420AD	PCB with Components w/o NB UNIT (10W: Version F)	
	C029420AE	PCB with Components w/o NB UNIT (100W: Version F)	
	C029420AF	PCB with Components w/o NB UNIT	
Q1001	G3801250	FET	2SK125
Q1002	G3801250	FET	2SK125
Q1003	G4800740L	FET	3SK74L
Q1004	G3802410Y	FET	2SK241Y
Q1005	G4800740L	FET	3SK74L
Q1006	G4800740L	FET	3SK74L
Q1007	G4800740L	FET	3SK74L
Q1008	G3304580B	Transistor	2SC458B
Q1009	G3304580B	Transistor	2SC458B
Q1010	G3801040J	FET	2SK104J
Q1011	G3801921G	FET	2SK192AGR
Q1012	G3107331P	Transistor	2SA733AP
Q1013	G3090074	Transistor	BA1A4M
Q1014	G1090633	IC	M5218P
Q1015	G3304580B	Transistor	2SC458B
Q1016	G3304580B	Transistor	2SC458B
Q1017	G3090077	Transistor	BA1L3Z
Q1018	G3304580B	Transistor	2SC458B
Q1019	G3304580B	Transistor	2SC458B
Q1020	G3090074	Transistor	BA1A4M
Q1021	G3304580B	Transistor	2SC458B
Q1022	G1090101	IC	uPC1037H
Q1023	G4800740L	FET	3SK74L
Q1024	G3802410Y	FET	2SK241Y
Q1025	G3802410Y	FET	2SK241Y
Q1026	G3305350B	Transistor	2SC535B
Q1027	G3801250	FET	2SK125
Q1028	G3304580B	Transistor	2SC458B
Q1029	G3090074	Transistor	BA1A4M
Q1030	G3090074	Transistor	BA1A4M
Q1031	G3090078	Transistor	DTA143ES
Q1032	G3320530	Transistor	2SC2053
Q1033	G3090074	Transistor	BA1A4M
Q1034	G1090633	IC	M5218P
Q1035	G3304584B	Transistor	2SC458BTZ
Q1036	G1090749	IC	M5223P
Q1037	G3090074	Transistor	BA1A4M
Q1038	G1090721	IC	M54563P
Q1039	G1090657	IC	uPD4028BC
Q1040	G1090836	IC	M54564P

• 10W Type

▲ 100W Type

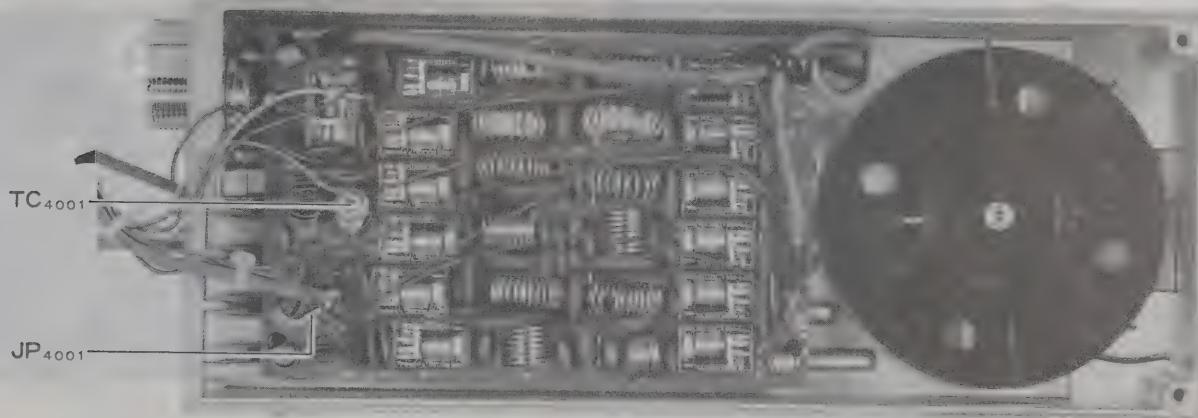
# ALIGNMENT

## VI. LPF Unit (CM Coupler Balance)

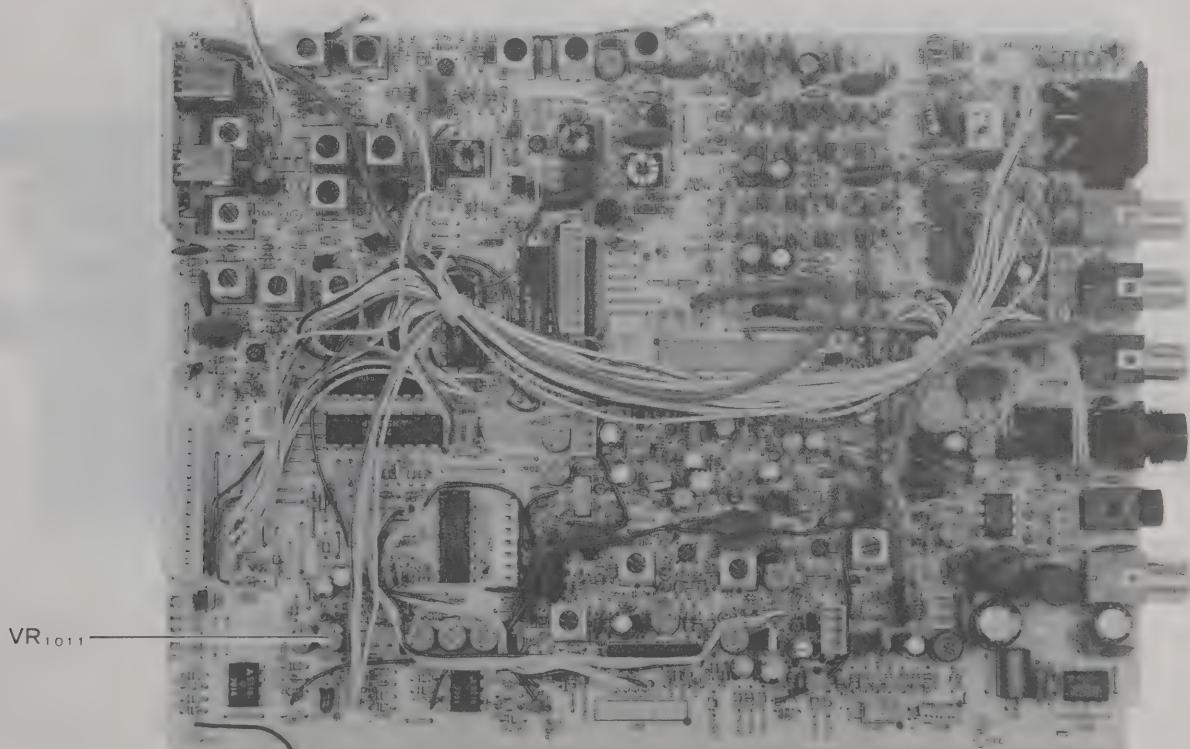
1. Connect the dummy load to the antenna jack, and the DC voltmeter between pin 3 of JP4001 and chassis ground.
2. Tune to 14.2000 MHz, CW mode, and set the DRIVE control fully clockwise.
3. Press the MOX button and adjust TC4001 for minimum deflection on the voltmeter.
4. Press the MOX button again to return to receive, and remove the test equipment.

## VII. Main Unit (AFP - Automatic Final Protection)

1. Connect the wattmeter and 16.7-ohm dummy load (three 50-ohm loads in parallel) to the antenna jack.
2. With the transceiver tuned to 14.2000 MHz, CW mode, set the DRIVE control fully clockwise.
3. Press the MOX button and adjust VR1011 for 75W output.
4. Press the MOX button again to return to receive, and disconnect the test equipment.



LPF UNIT ALIGNMENT POINTS

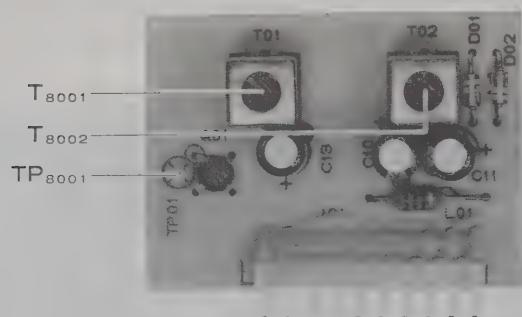


MAIN UNIT ALIGNMENT POINT  
(AFP Section)

# ALIGNMENT

## IV. Noise Blanker Unit

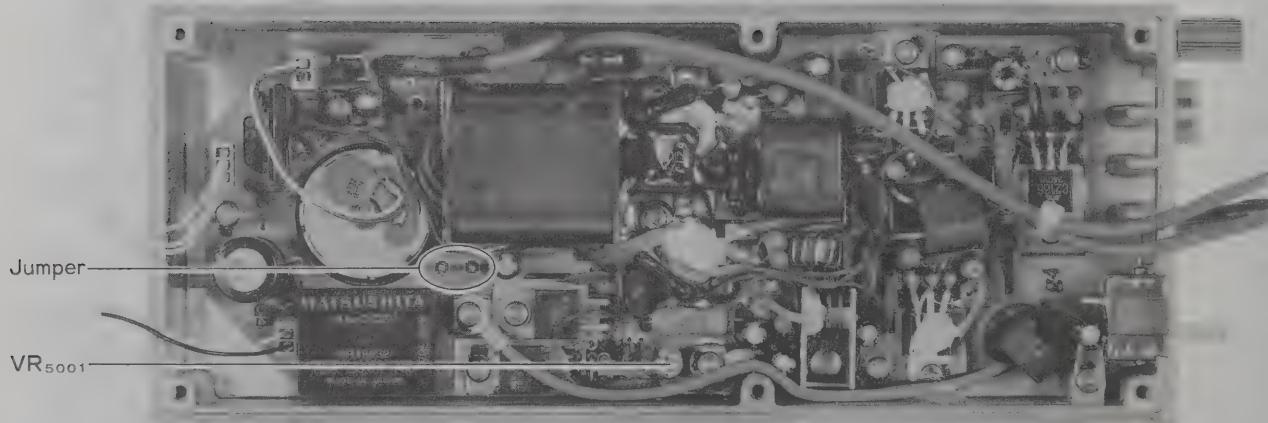
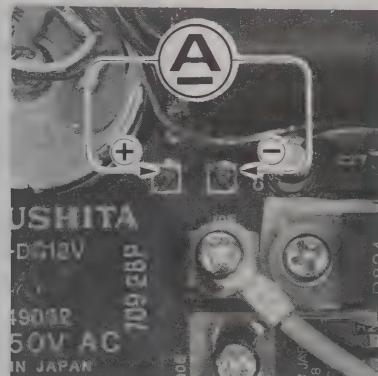
1. Connect the RF generator to the antenna jack, and the DC voltmeter between TP8001 and chassis ground.
2. Tune the transceiver and RF generator to 14.2000 MHz, and inject 40 dBu with no modulation.
3. Press the NB switch and select the USB mode.
4. Adjust T8001 and T8002 for minimum deflection on the voltmeter.
5. Disconnect the test equipment.



NB UNIT ALIGNMENT POINTS

## V. 100W PA Unit (Idling Current)

1. Temporarily remove the jumper indicated below, and connect the DC milliammeter (set to 500 mA range) in its place.
2. Set the transceiver to USB mode, and set the MIC gain fully counterclockwise.
3. Press the MOX button and adjust VR5001 for  $200 \pm 50$  mA on the milliammeter.
4. Press the MOX button again to return to receive, remove the milliammeter and reinstall the jumper.



100W PA UNIT ALIGNMENT POINTS

# ALIGNMENT

## III. Main Unit, Transmitter

### A. TX IF

1. Connect the dummy load and wattmeter to the antenna jack, and tune to 14.2000 MHz, CW mode.
2. Press the MOX button and set the DRIVE control for 50W output.
3. Adjust T1014-T1019 for peak on the wattmeter, reducing the DRIVE, if necessary, to keep power below 60W output.
4. Press the MOX button again to return to receive.

### B. ALC & PO Meter Sensitivity

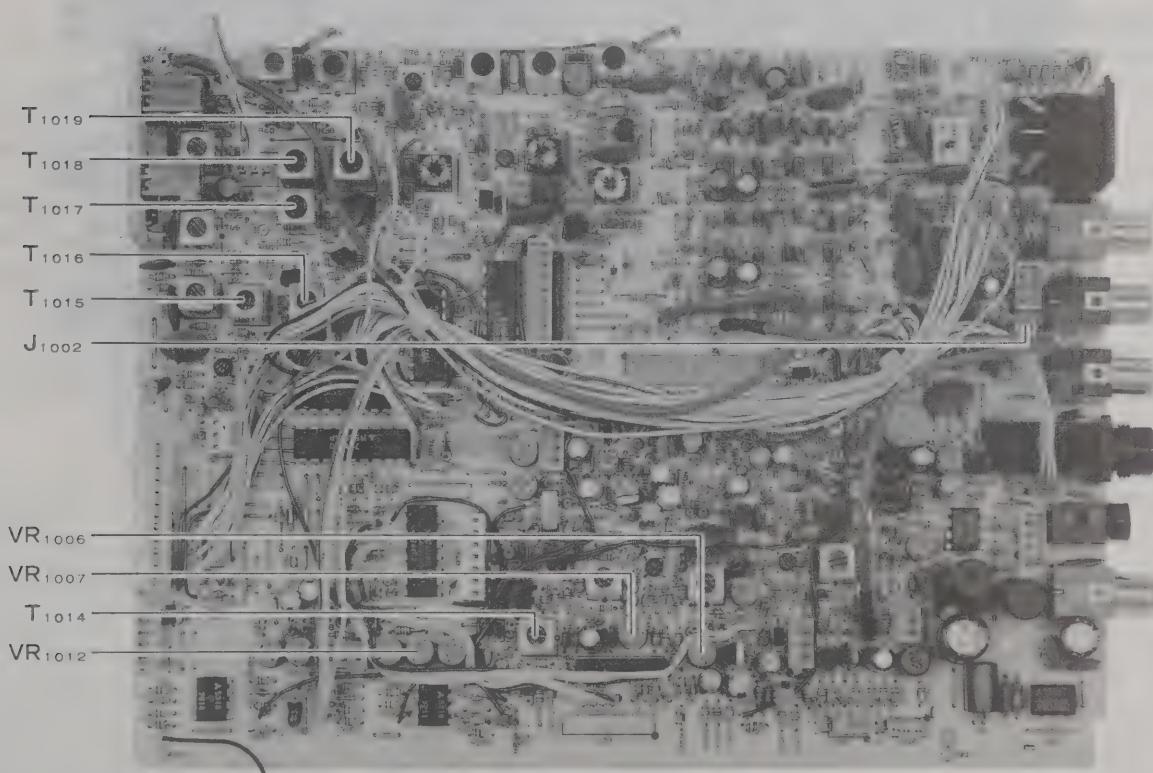
1. With the dummy load and wattmeter connected to the antenna jack, and tuned to 14.2000 MHz, CW mode, set the DRIVE control fully clockwise.
2. Press the MOX button and adjust VR1010 for 100W output, and then VR1012 for S-meter deflection to "8" on the PO scale, repeating both adjustments alternately several times.

### C. SSB Carrier Balance

1. With the dummy load and wattmeter connected to the antenna jack, and tuned to 14.2000 MHz, CW mode, set the MIC gain fully counterclockwise.
2. Connect the RF voltmeter to J1002.
3. Press the MOX button and adjust VR1007 for minimum on the voltmeter.
4. Press the MOX button again to return to receive, and disconnect the voltmeter.

### D. AM Carrier Level

1. With the dummy load and wattmeter connected to the antenna jack, and tuned to 14.2000 MHz, AM mode, set the MIC gain fully counterclockwise.
2. Preset VR1006 fully clockwise.
3. Press the MOX button and set the DRIVE control for 80W output.
4. Adjust VR1006 for 20W output.
5. Press the MOX button again to return to receive, and remove the test equipment.



MAIN UNIT ALIGNMENT POINTS  
(Transmitter Section)

# ALIGNMENT

## C. RX IF, Part II

1. Set the transceiver to 14.2000 MHz (USB).
2. Tune the RF generator for a 1.5 kHz heterodyne in the receiver, and adjust the injection level for S-7 on the S-meter.
3. Adjust T1003-T1013 for maximum on the S-meter, reducing the injection level, if necessary, to keep S-meter deflection near S-7.
4. Reduce the injection level to +6dBu and adjust VR1001 for S-1 indication.
5. Perform the next procedure.

## D. S-Meter Sensitivity, Part II

Perform the preceding procedure, if not done already.

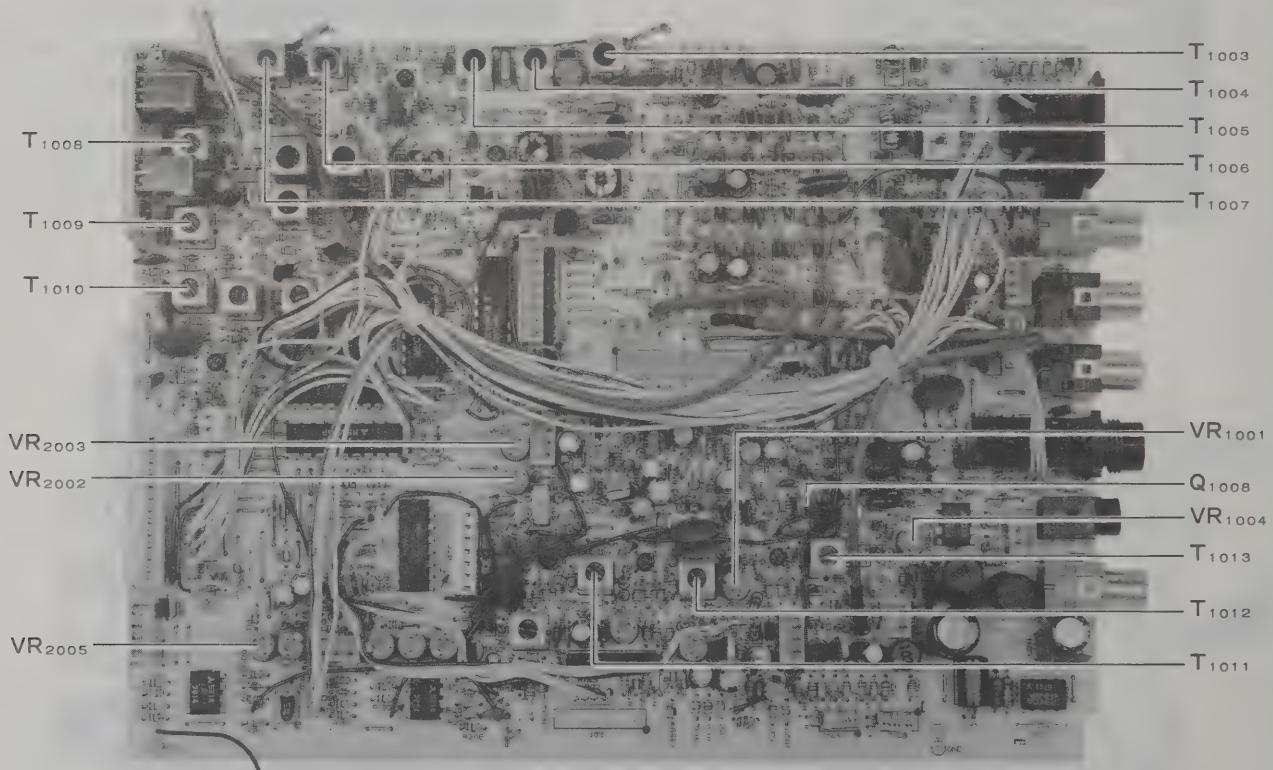
1. Set the RF injection level to +100 dBu and adjust VR1003 for S-meter deflection of 60 dB over S-9.
2. Disconnect the test equipment.

## E. RX 1st Mixer

1. In LSB mode, tune to the internal heterodyne near 7.1 MHz.
2. Adjust VR1004 for best null of the heterodyne.

## F. Noise Squelch

1. Tune to 14.2000 MHz, USB mode, and set the SQL control to the 10 o'clock position.
2. Adjust VR1005 so the squelch just closes when no signal is received.



# ALIGNMENT

<u>Adjust. Frequency</u>	<u>Adjust. Transformer</u>	<u>Check Freq.</u>	<u>Check Voltage</u>
2.5000	T2006	2.4999	4.5-6.5V
		7.4999	5.0-6.5V
		0.1000	1.5-3.0V
7.5000	T2007	14.4999	5.0-6.5V
14.5000	T2008	21.4999	5.0-6.5V
21.5000	T2009	29.9999	5.0-6.5V

3. Connect the RF voltmeter to pin 13 of Q2024 and tune the transceiver to 29.9999 MHz. Confirm at least 90mVrms on the RF voltmeter.
4. Disconnect the voltmeters.

## E. Reference Oscillator

1. Connect the frequency counter to the exposed lead of C2030 (TP2002).
2. Tune the transceiver to 7.0000 MHz, LSB mode.
3. If the TCXO option is installed, adjust the trimmer accessible through the hole in the TCXO housing, if necessary, for 5.7635 MHz  $\pm$ 3 Hz on the counter.
4. If the TCXO option is not installed, adjust TC2004, if necessary, for 5.7635 MHz  $\pm$ 10 Hz on the counter.
5. Remove the counter.

## F. Carrier Point

1. Disconnect TMP plug P2001 from J1017 on the Main Unit, and connect the frequency counter to P2001.
2. With the LSB mode selected, adjust TC2003 for 8.2135 MHz  $\pm$ 10 Hz on the counter.
3. Select USB mode and adjust TC2002 for 8.2165 MHz  $\pm$ 10 Hz on the counter.
4. Select CW mode and set the DRIVE control fully counterclockwise (minimum).
5. Press the MOX button to transmit, and adjust TC2001 for 8.2158 MHz  $\pm$ 10 Hz on the counter.
6. Press the MOX button again to return to receive, remove the counter and reconnect P2001 to J1017 (unless performing the next procedure).

## G. Carrier Level

1. Disconnect TMP plug P2001 from J1017 on the Main Unit, and connect a 50-ohm resistor in parallel with the RF voltmeter to P2001.
2. Confirm at lease 230 mVrms on the RF voltmeter in all modes.
3. Remove the voltmeter and resistor, and reconnect P2001 to J1017.

## II. Main Unit - Receiver

### A. RX IF, Part I

1. Connect the RF generator to the antenna jack, and the AF voltmeter and an 8-ohm, 3W resistor across the EXT SPKR jack.
2. Tune the transceiver to 14.2000 MHz, USB mode. Set the AF gain to the 10 o'clock position.
3. Tune the RF generator for a 1.5 kHz heterodyne in the receiver, and adjust the injection level for S-7 on the S-meter.
4. Adjust T1003-T1013 for peak on the AF voltmeter, reducing the injection level, if necessary, to keep S-meter deflection near S-7.
5. Leave the test equipment connected for the next three procedures.

### B. S-meter Sensitivity, Part I

1. Connect the RF voltmeter to the emitter of Q1008.
2. Tune the transceiver to 14.0000 MHz, USB mode, and adjust VR1004 for minimum on the voltmeter.
3. Adjust VR1002 so that the S-meter just begins to deflect.
4. Disconnect the voltmeter, and continue with the next procedure.

# ALIGNMENT

## I. Local Unit

### A. 2nd Local Overall Check

1. Disconnect TMP plug P2002 from J1022 on the Main Unit.
2. Connect the frequency counter to P2002 and confirm 38.8380 MHz  $\pm 400$  Hz on the counter.
3. Remove the counter and connect a 50-ohm resistor and the RF voltmeter to P2002.
4. Confirm at least 230 mVrms on the voltmeter.
5. Disconnect the resistor and voltmeter, and replace P2002 in J1022.

### B. PLL Subloop VCO

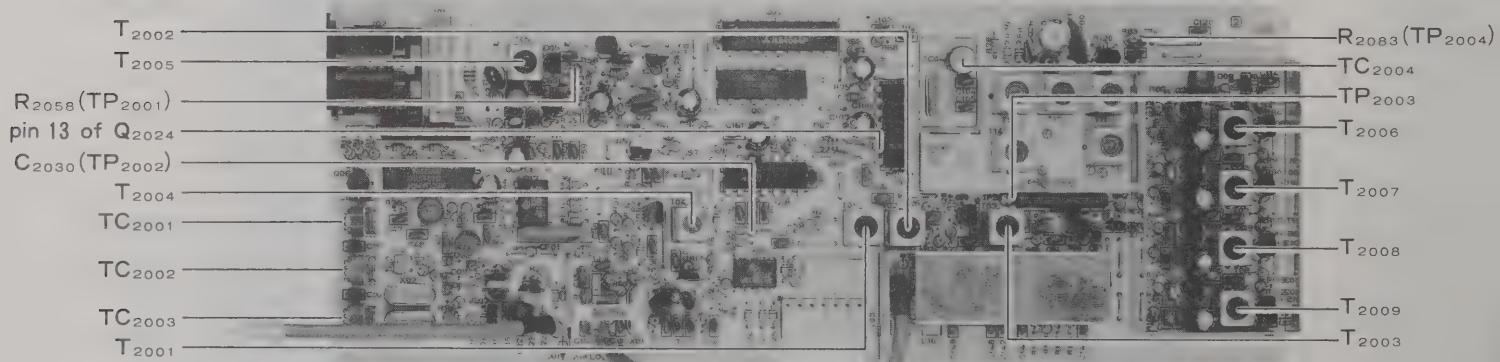
1. Connect the DC voltmeter between the exposed lead of R2058 (TP2001) and chassis ground.
2. Tune the transceiver to 7.0015 MHz, LSB mode.
3. Adjust T2005 for  $2.0 \pm 0.1$ V on the meter.
4. Retune the transceiver to 7.0014 MHz and confirm at least 5.6  $\pm 0.6$ V on the voltmeter.
5. Disconnect the voltmeter.

### C. PLL Subloop BPF

1. Connect the RF voltmeter to the exposed lead of C2030 (TP2002).
2. Tune the transceiver to 7.0265 MHz, LSB mode.
3. Adjust T2004 for peak on the voltmeter (at least 70 mVrms).
4. Move the voltmeter to TP2003, and retune the transceiver to 7.0267 MHz.
5. Adjust T2001-T2003 for peak on the voltmeter (more than 50 mVrms).
6. Disconnect the voltmeter.

### D. PLL Main Loop VCO

1. Connect the DC voltmeter between the exposed lead of R2083 (TP2004) and chassis ground.
2. Referring to the following table, tune the transceiver to each adjustment frequency (MHz), adjust the corresponding transformer for  $1.5 \pm 0.1$ V, retune to the corresponding check frequency and confirm the check voltage on the voltmeter.



MAIN UNIT ALIGNMENT POINTS

# ALIGNMENT

## Alignment Equipment

Frequency counter with accuracy of 0.1 ppm to 100 MHz

DC voltmeter with at least 10-Megohm input impedance

RF voltmeter with at least 5% accuracy to 100 MHz, high impedance, and ranging from 10 mV to 3 Vrms

AF millivoltmeter

DC milliammeter ranging to 500 mA

RF in-line wattmeter

Resistive dummy load, 50 ohms, 150W; three required for SWR Turndown alignment

RF signal generator covering 1-30 MHz, with calibrated output levels from 5 dB $\mu$  to 100 dB $\mu$

AF signal generator with calibrated output levels from 1 mV to 25 mV

RF sampling coupler ("T")

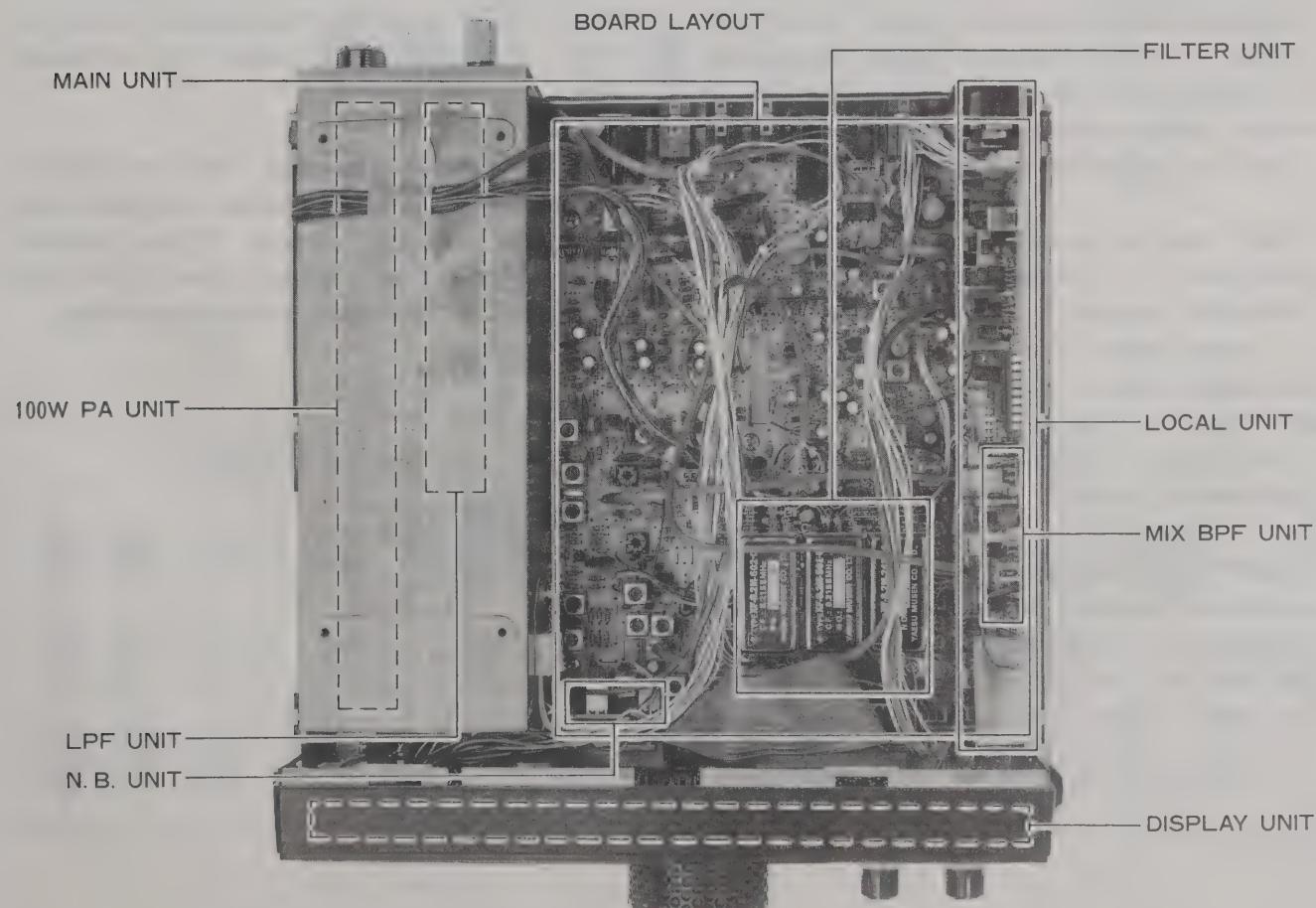
## Additional Alignment Precautions

Correct alignment requires that the ambient temperature be the same as that of the transceiver and test equipment, and that this temperature be held constant between 20 and 30 °C (68 to 86 °F). When the transceiver is brought into the shop from hot or cold air it should be allowed some time for thermal equalization before alignment.

Alignments must only be made with oscillator shields and circuit boards firmly affixed in place. Also, the test equipment must be thoroughly warmed up before beginning.

Alignment values assume a DC supply voltage of 13.5V DC.

**Note:** Signal levels in dB referred to in the alignment procedure are based on 0dB $\mu$ =0.5uV.



# ALIGNMENT

The FT-747GX is carefully designed to allow the knowledgeable operator to make all adjustments required for various station conditions, modes and operator preferences simply from the controls on the front panel, without opening the case of the transceiver. These adjustments are described in the FT-747GX Operating Manual.

The following procedures cover the sometimes critical and tedious adjustments that are not normally required once the transceiver has left the factory. However, if damage occurs and some parts subsequently be replaced, realignment may be required. If a sudden problem occurs during normal operation, it is likely due to component failure; realignment should not be done until after the faulty component has been replaced.

We recommend servicing be performed only by authorized Yaesu service technicians who are experienced with the circuitry and fully equipped for repair and alignment. Therefore, if a fault is suspected, contact the dealer from whom the transceiver was purchased for instructions regarding repair. Authorized Yaesu service technicians realign all circuits and make complete performance checks to ensure compliance with factory specifications after replacing any faulty components.

Those who do undertake any alignment are cautioned to proceed at their own risk. Problems caused by unauthorized attempts at realignment are not covered by the warranty policy. Also, Yaesu must reserve the right to change circuits and alignment procedures in the interest of improved performance, without notifying owners.

Under no circumstances should alignment be attempted unless the normal function and operation of the transceiver are clearly understood, the cause of the malfunction has been clearly pinpointed and any faulty

components replaced, and the need for realignment determined to be absolutely necessary.

The following test equipment (and thorough familiarity with its correct use) is necessary for complete realignment. Correction of problems caused by misalignment resulting from use of improper test equipment is not covered under the warranty policy. While most steps do not require all equipment listed, interactions of some adjustments may require complex adjustments be performed afterwards. Do not attempt to perform only a single step unless it is clearly isolated electrically from all other steps. Rather, have all test equipment ready before beginning, and follow all of the steps in a section in the order they are presented.

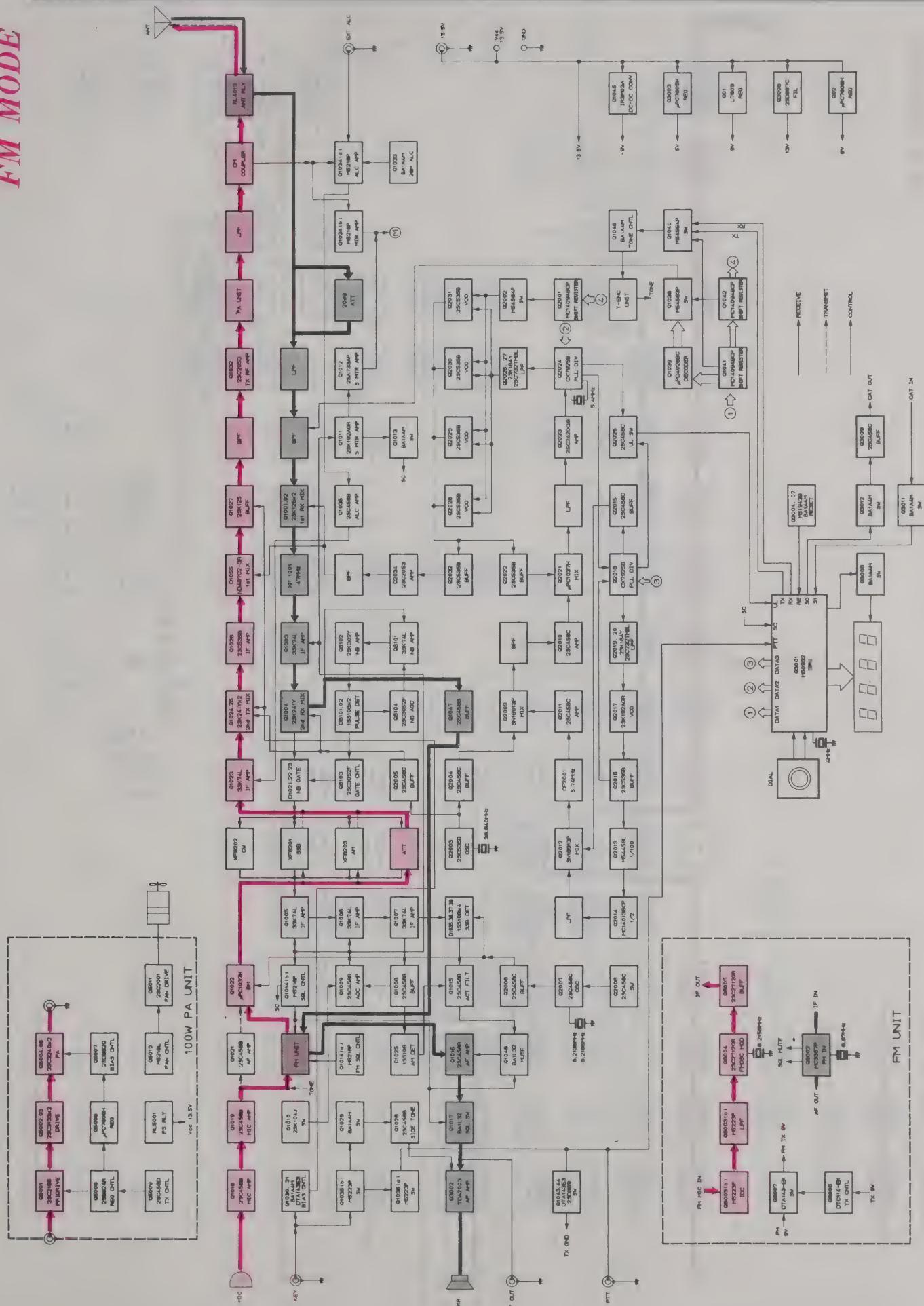
A 50-ohm dummy load must be connected to the antenna jack in steps calling for transmission (pressing the MOX button). Correct alignment is not possible with an antenna.

The NAR, ATT and NB buttons should be set to OFF and the SQL control must be fully counterclockwise, unless stated otherwise.

After completing one step, read the following step to determine whether the same test equipment will be required. If not, remove the test equipment (except dummy load and wattmeter, if connected) before proceeding.

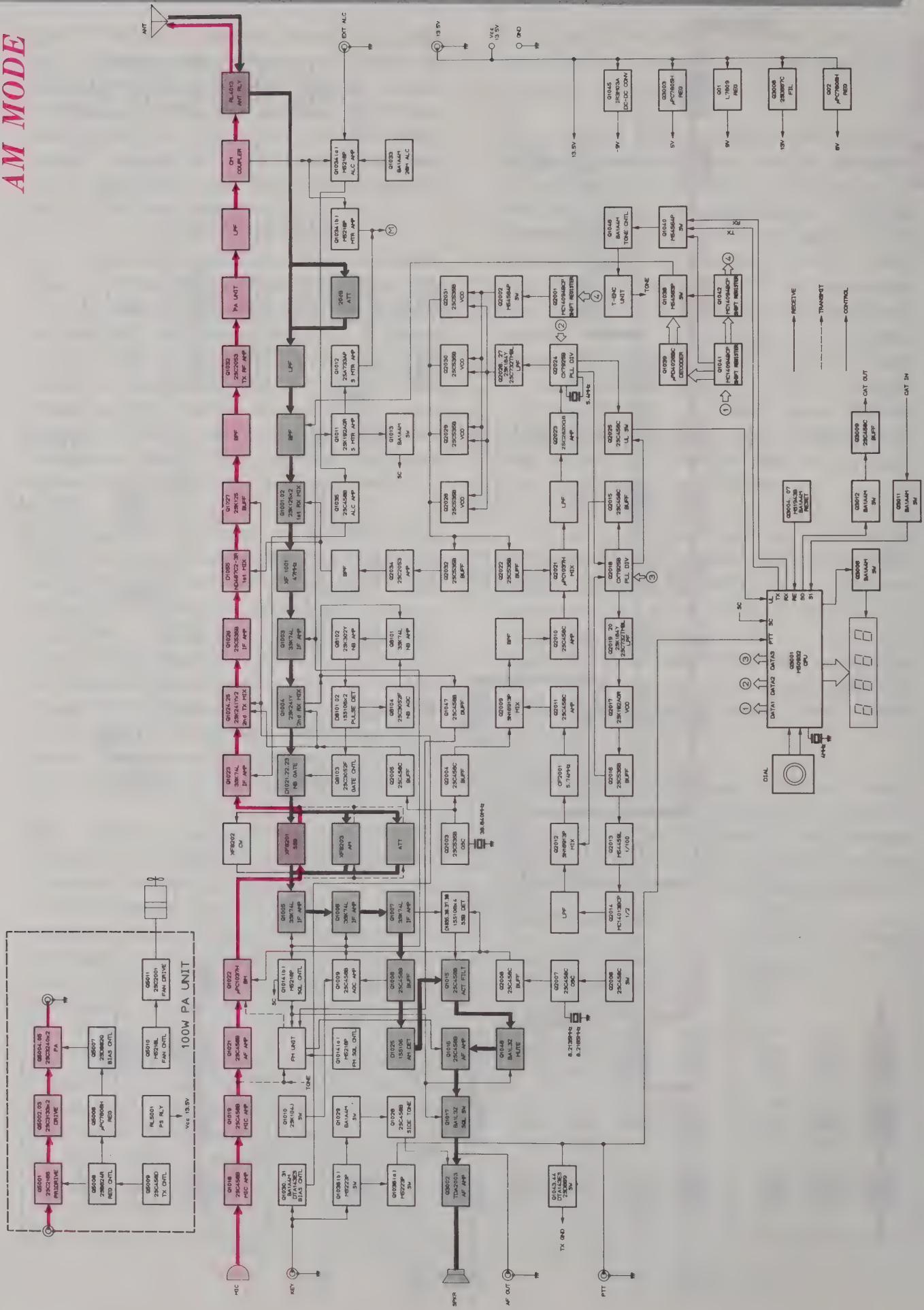
## FM MODE

# SIGNAL PATH



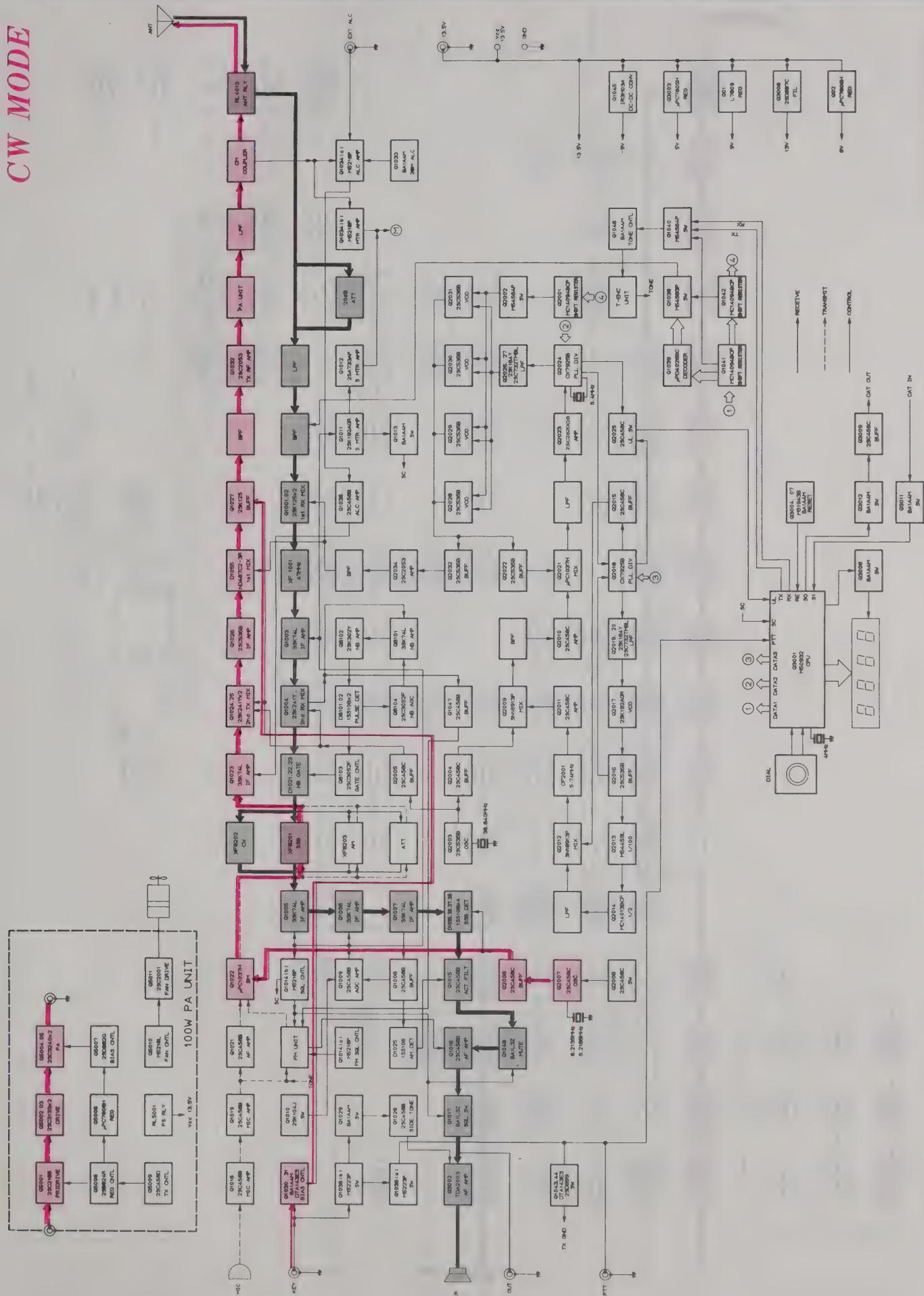
# SIGNAL PATH

AM MODE



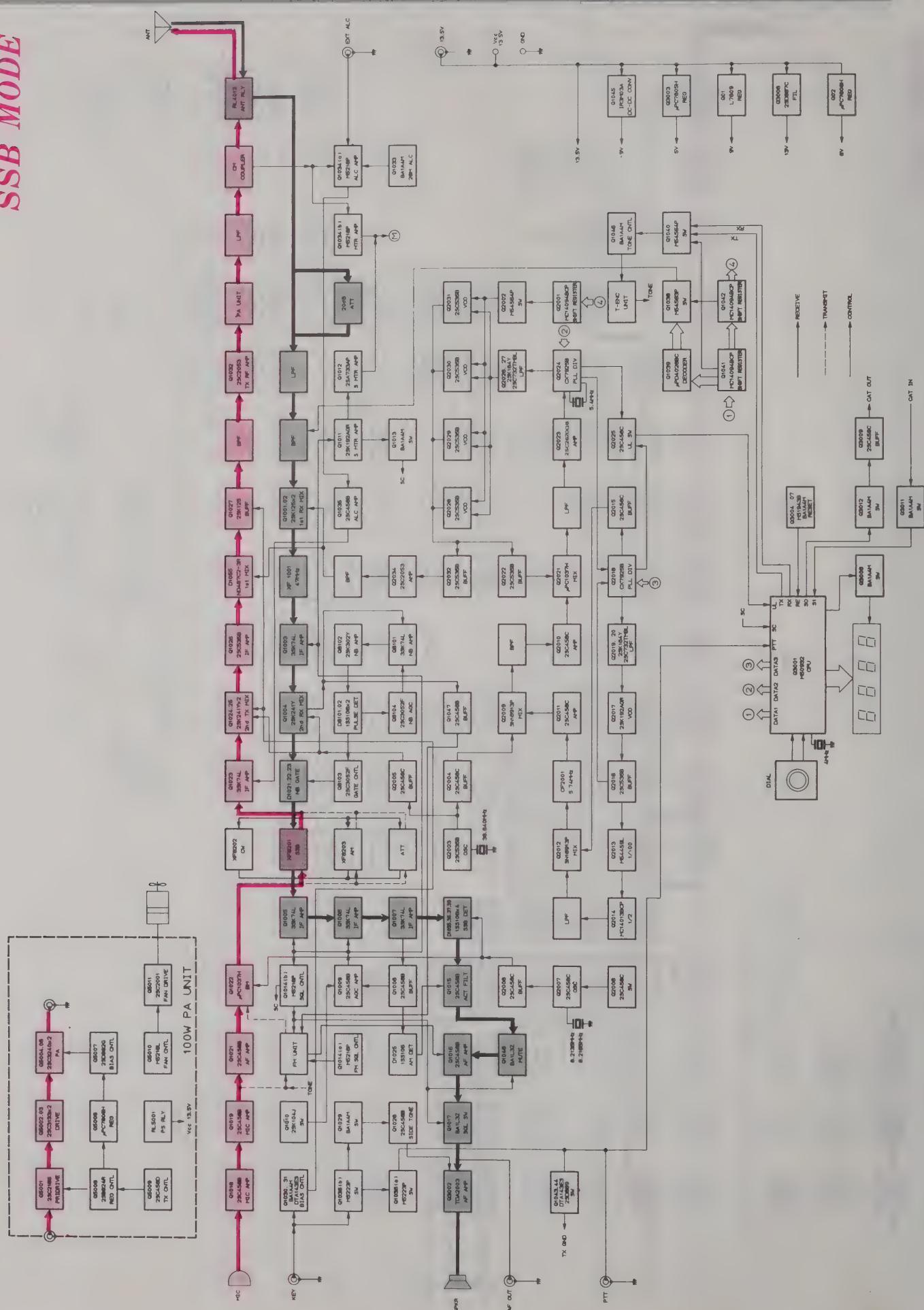
CW MODE

## SIGNAL PATH



## SIGNAL PATH

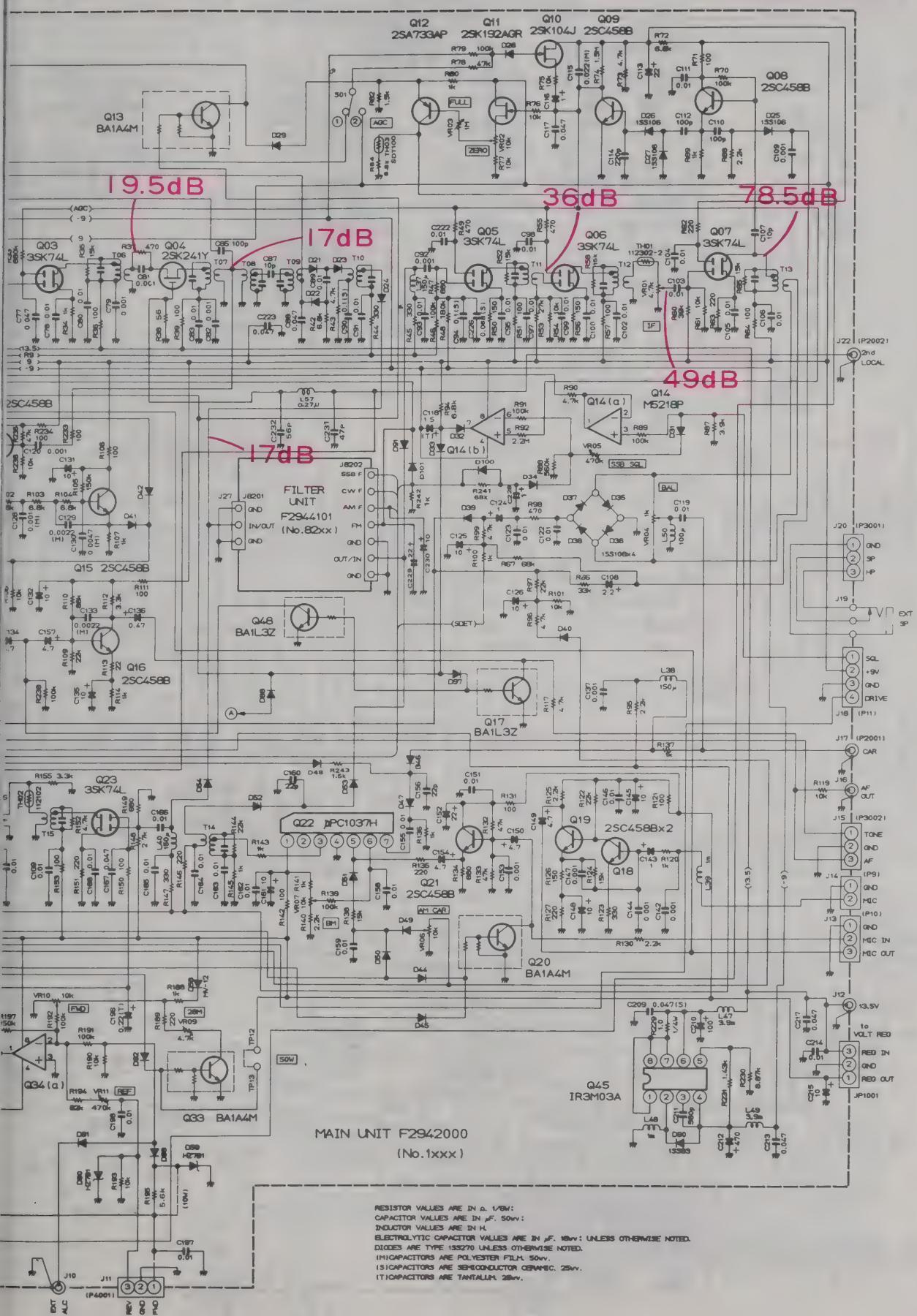
SSB MODE







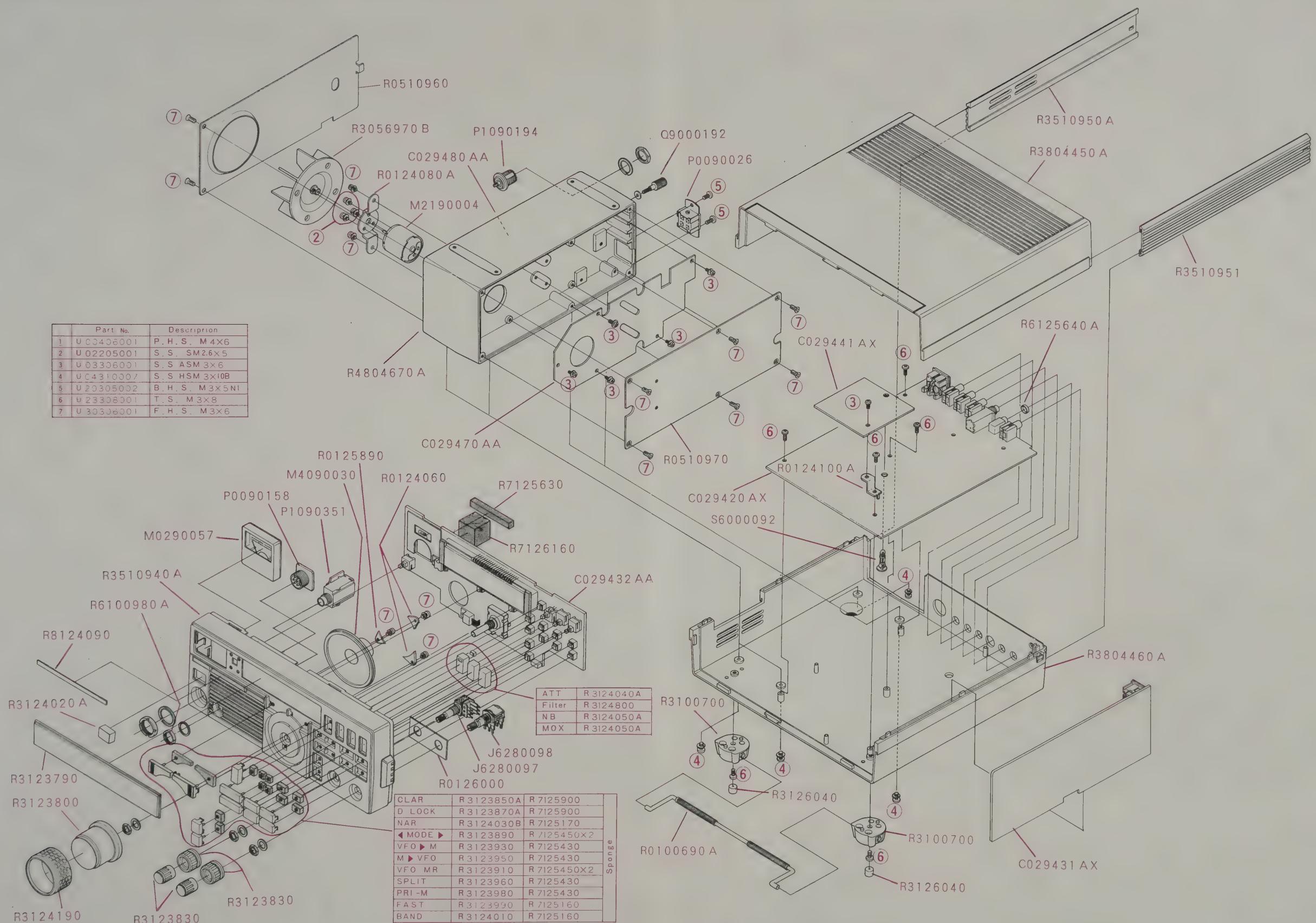
E2530900(807A-0K)





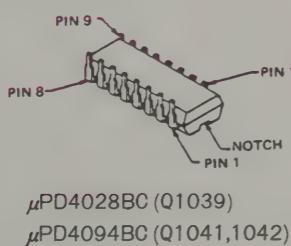
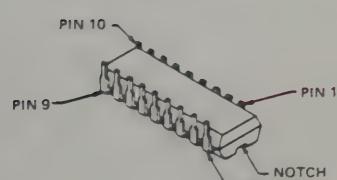
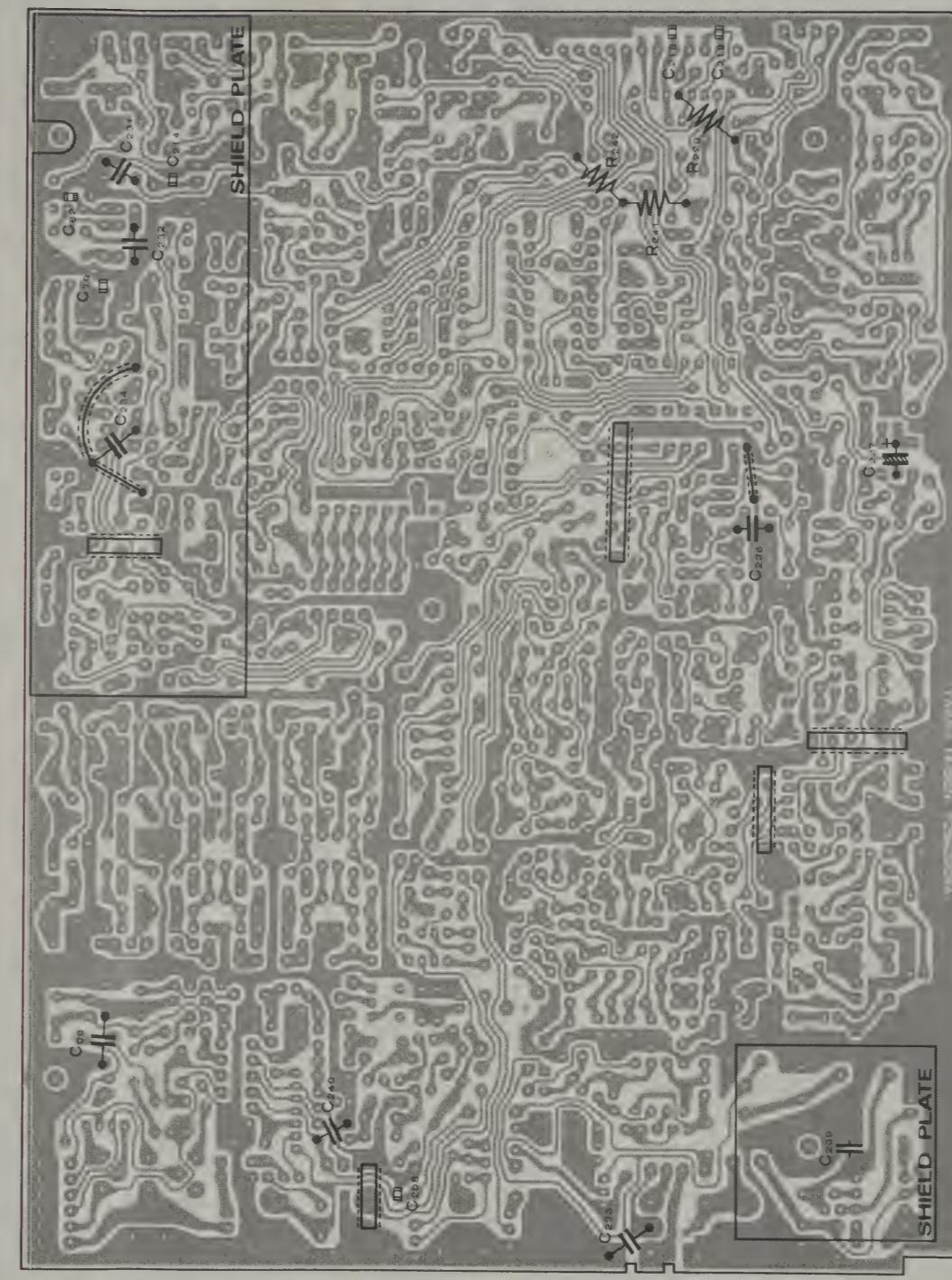
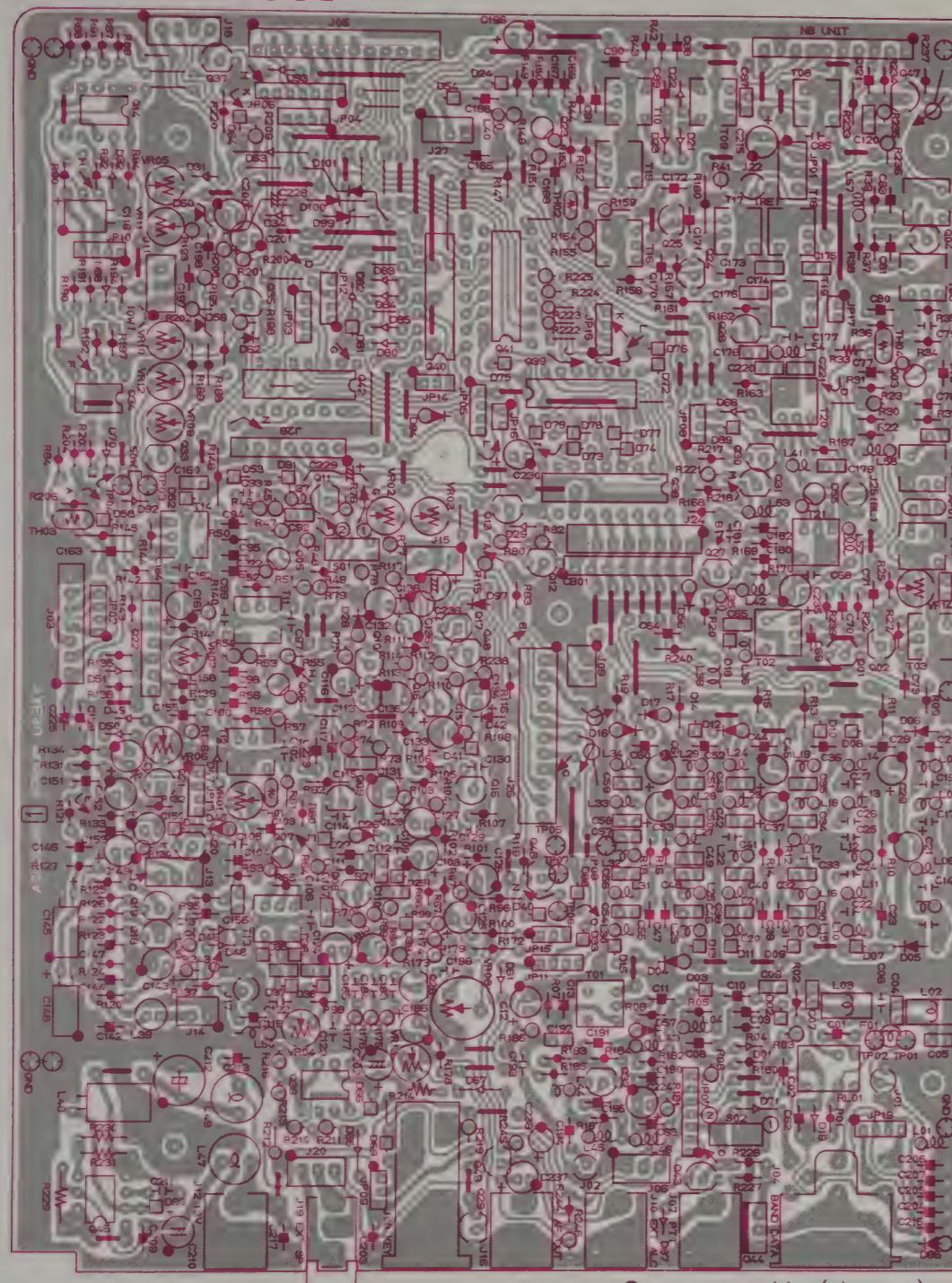
E2530900(807A-0K)

# EXPLODED VIEW

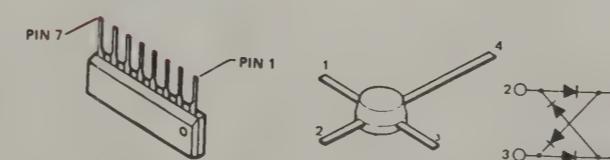


# MAIN UNIT

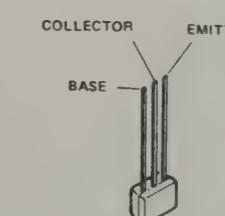
## PARTS LAYOUT



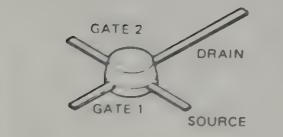
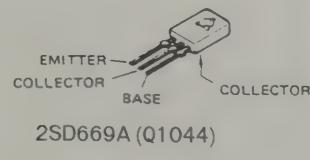
IR3M03A (Q1045)  
M5218P (Q1014,1034)  
M5223P (Q1036)



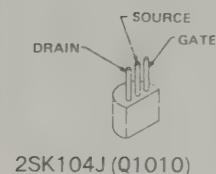
ND487C2-3R (D1055)



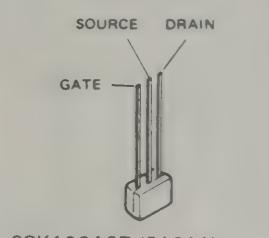
BA1L3Z (Q1017,1048)  
DTA143ES (Q1031,1043)



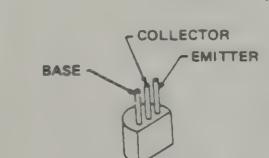
3SK74L (Q1003,  
1005~1007,  
1023)



2SK104J (Q1010)

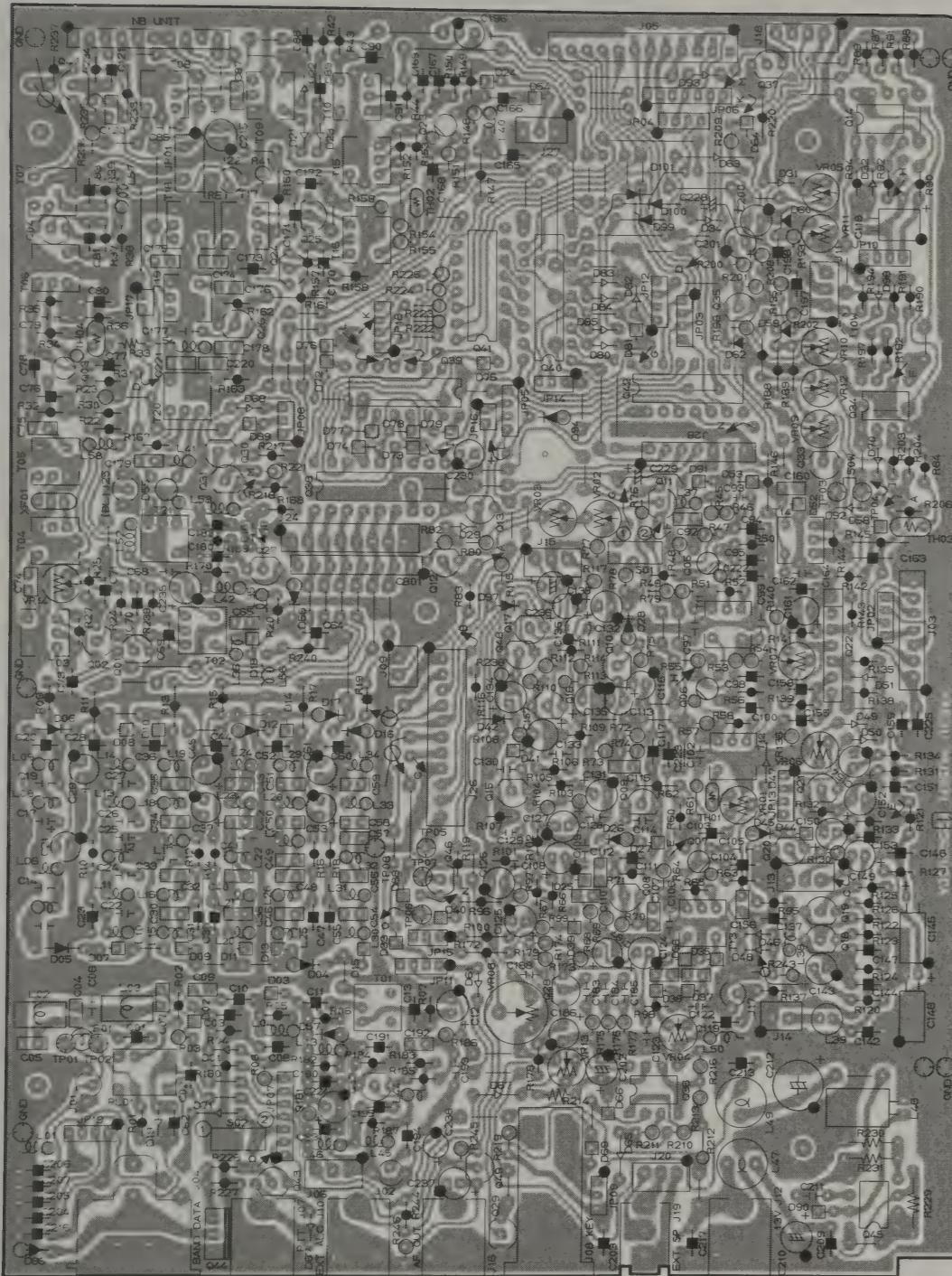


2SK125 (Q1001,1002,  
1027)



2SA733AP (Q1012)  
2SC458B (Q1008,1009,  
1015,1016,  
1018,1019,  
1021,1028,  
1047,1049)

2SC458BTZ (Q1035)  
2SC535B (Q1026)  
2SC2053 (Q1032)



Component side (reverse)

**MAIN UNIT VOLTAGE CHART  
(DC VOLT)**

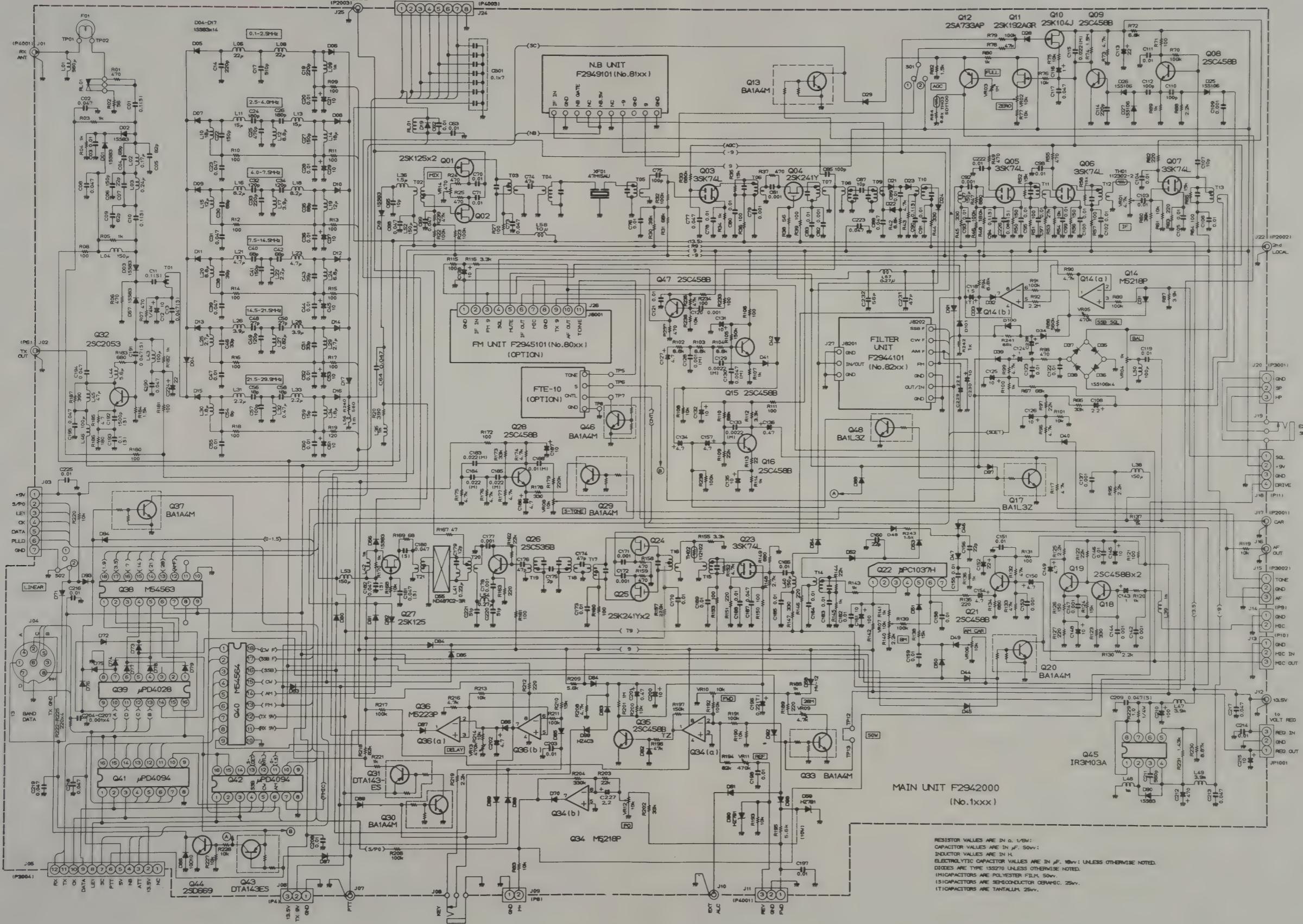
	E (S)	C (D)	B (G <sub>1</sub> )	(G <sub>2</sub> )	REMARKS
Q1001	2.5/-0.1	127/13.4	-0.7/-5.1		RX/TX
Q1002	2.5/-0.1	127/13.4	-0.7/-5.1		RX/TX
Q1003	2.0/0	132/13.4	1.5/-4.1	3.2/3.2	RX/TX
Q1004	0.6	13.4	0		
Q1005	1.7/0	7.8/8.8	1.7/-4.0	3.4/3.4	RX/TX
Q1006	2.2	7.4	2.4	3.4	
Q1007	1.9	8.0	1.8	3.6	
Q1008	4.8	8.3	5.5		
Q1009	0	3.4	0.1		
Q1010	3.6	3.6	0		
Q1011	6.2	8.8	3.4		
Q1012	5.3/0.7	0/0	4.7/4.6		RX/TX
Q1013	0/0	5.0/0.1	0/4.3		RX/TX
Q1015	4.2	8.4	4.8		
Q1016	1.3	4.4	2.0		
Q1017	0/0	0/0	0/1.37		RX/TX
Q1018	0.1	1.4	0.7		
Q1019	0.8	4.2	1.4		
Q1020	0/0	0/0	7.0/0		RX/TX
Q1021	3.0	8.4	3.6		
Q1023	1.9	0	1.8	3.2	
Q1024	0/0.6	8.9/8.6	-3.9/0.1		RX/TX
Q1025	0/0.6	8.9/8.6	-3.9/0.1		RX/TX
Q1026	3.0	7.5	3.8		
Q1027	0/1.6	-4.0/0.1	0/6.9		RX/TX
Q1028	0.6(0.3/0.6)	7.7(7.7/3.7)	1.0(1.0/0.9)		RX CW/TX CW KEY UP/DWN
Q1029	0(0/0)	0.6(0.6/0)	0(0/1.0)		RX CW/TX CW KEY UP/DWN
Q1030	0(0/0)	0(7.5/0)	0(0/10.5)		RX CW/TX CW KEY UP/DWN
Q1031	0(7.5/7.5)	0(0.5/7.5)	0(7.5/0)		RX CW/TX CW KEY UP/DWN
Q1032	8.1	13.2	8.8		
Q1033	0	6.9	0		
Q1035	0	3.1	-0.5		
Q1037	0/0	0.5/7.4	4.0/0		0.5~1.5, 14.5~18.5 21.5~25.0MHz / other
Q1043	5.5/5.0	0/5.0	5.0/0.6		RX/TX
Q1044	0/0	0.6/0	0/0.6		RX/TX
Q1046	0/0	0.4/0	0/4.8		RX/TX (MODE FM SPLIT ON)
Q1047	0.8	8.7	1.5		
Q1048	0/0	0/0	0.1/3.7		RX/TX

**MAIN UNIT IC VOLTAGE CHART  
(DC VOLT)**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	REMARKS
Q1014	8.4/2.5	8.4/2.5	8.8/2.5	-9.0/-9.0	3.1/2.7	7.0/1.8	-7.6/8.4	8.9/8.9											SQL VR CCW/CW
Q1022	7.0	—	5.4	0	3.1	3.1	3.1												
Q1034	-5.2	0	0	-9.0	0	0	-7.7	8.9											
Q1036	12.0/0.70/10.2	42/3.9	0/0	4.2/3.9	12.9/2.1	0/10.8	13.1/12.3												KEY UP/DWN (MODE CW VR13 MIN)
Q1038	0	0	0	4.1	0.2	0.2	0	0.1	13.4	0	0.2	13.0	0	0	12.0	0	0	0	MODE AM, 14MHz
Q1039	0	0	0	0	0	4.7	0	0	0	5.0	0	5.0	0	0	5.0				MODE AM, 14MHz
Q1040	0/0	4.8/4.8	0/0	0/0	0/0	0/0	0/4.4	4.5/0	8.9/8.9	0/0	7.6/-1.3	0/7.5	0/0	0/0	7.7/7.7	7.9/7.9	0/0		MODE USB, RX/TX
Q1041	0	4.6	0	5.0	0	5.0	0	0	0	0	0	0	0	0	4.8	5.0	5.0	14MHz	
Q1042	0	0	0	4.8	0	0	0	0	0	0	0	0	0	0	4.9	5.0	5.0		MODE USB, 14MHz
Q1045	13.5	0.1	-8.2	-9.0	-7.8	13.5	13.5	13.5											

# MAIN UNIT

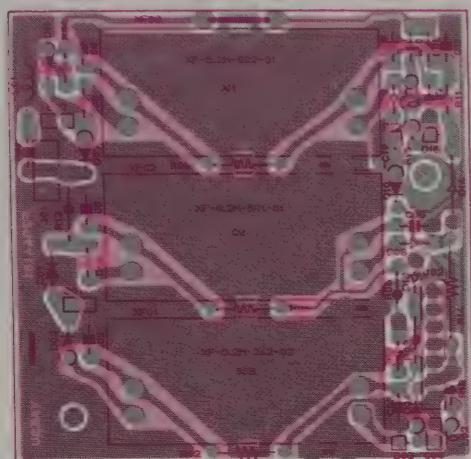
## CIRCUIT DIAGRAM



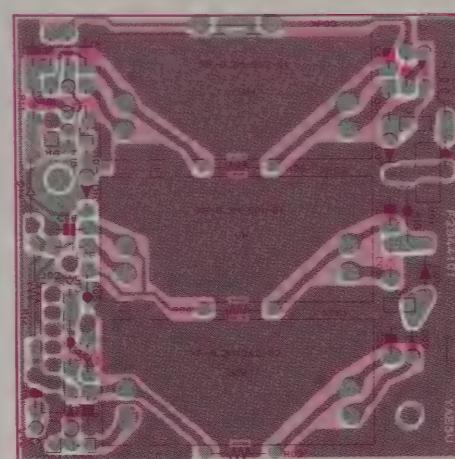
RESISTOR VALUES ARE IN Ω. V/W:  
 CAPACITOR VALUES ARE IN F. 50V:  
 INDUCTOR VALUES ARE IN H.  
 ELECTROLYTIC CAPACITOR VALUES ARE IN μF. 50V: UNLESS OTHERWISE NOTED.  
 DIODES ARE TYPE 1N3370 UNLESS OTHERWISE NOTED.  
 (IM)CAPACTORS ARE POLYESTER FILM. 50V.  
 (IS)CAPACTORS ARE SEMICONDUCTOR CERAMIC. 25V.  
 (IT)CAPACTORS ARE TANTALUM. 25V.

# FILTER UNIT & NB UNIT

## FILTER UNIT PARTS LAYOUT

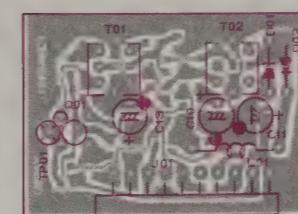


Component side (obverse)

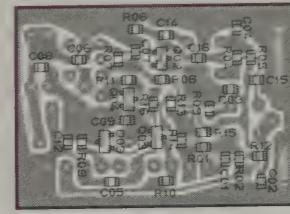


Component side (reverse)

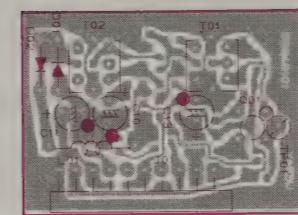
## NB UNIT PARTS LAYOUT



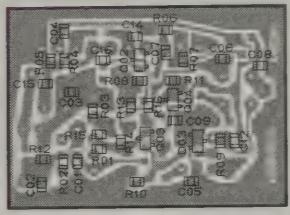
Component side (obverse)



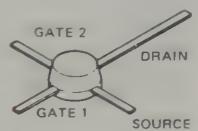
Solder side (obverse)



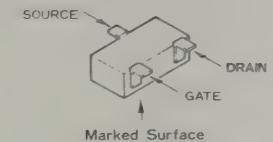
Component side (reverse)



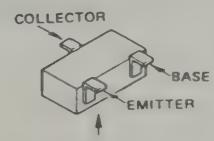
Solder side (reverse)



3SK74L  
(Q8101)

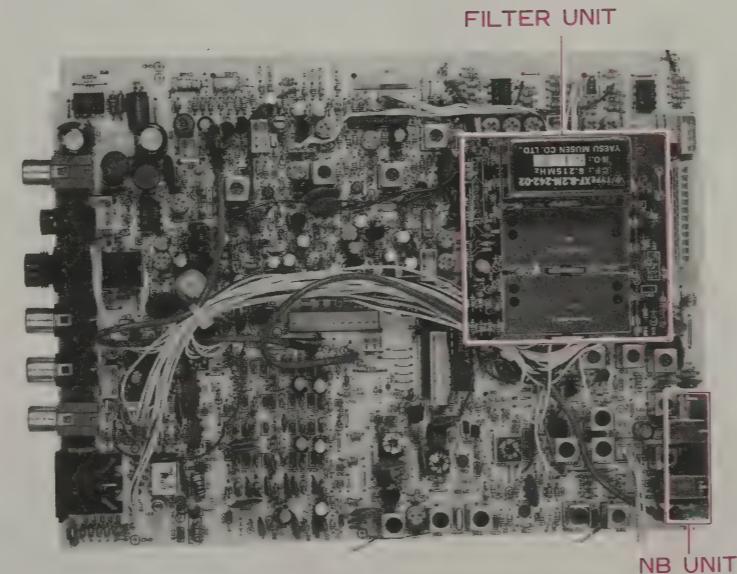
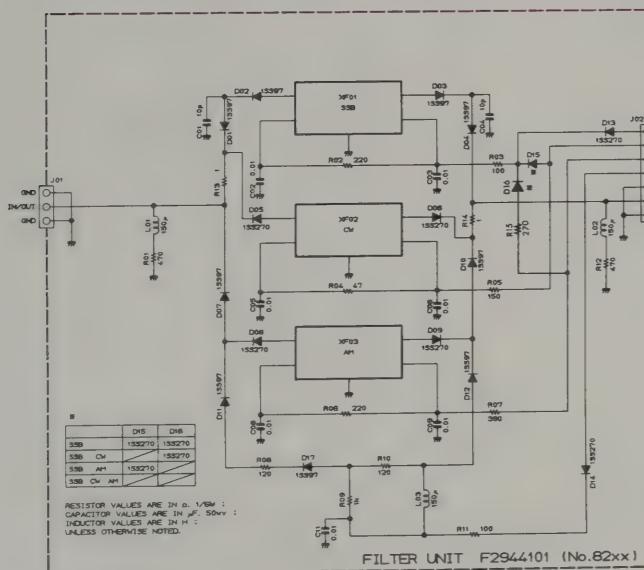


2SK302Y  
(Q8102)

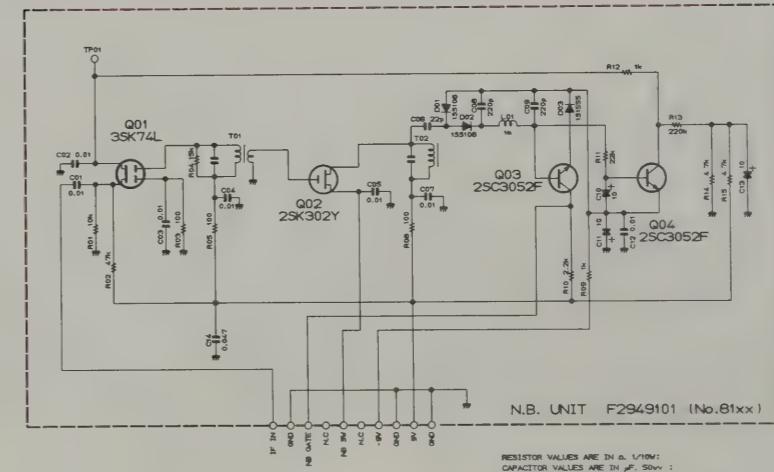


2SC3052F  
(Q8103,8104)

## FILTER UNIT CIRCUIT DIAGRAM



## NB UNIT CIRCUIT DIAGRAM

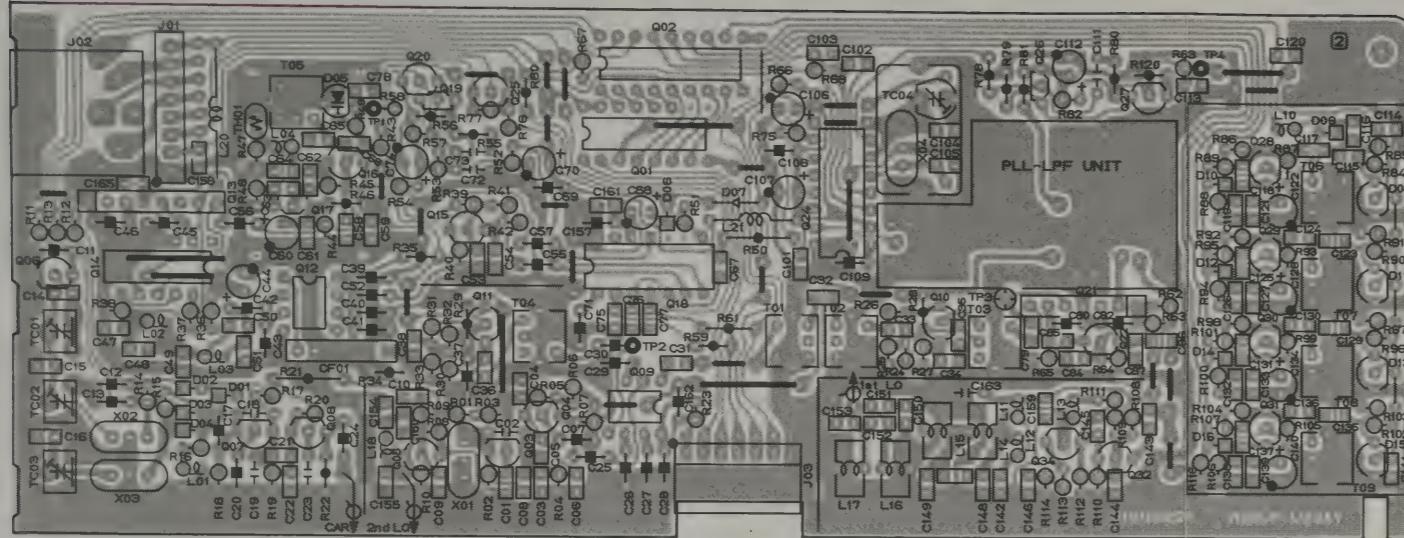


## NB UNIT VOLTAGE CHART (DC VOLT)

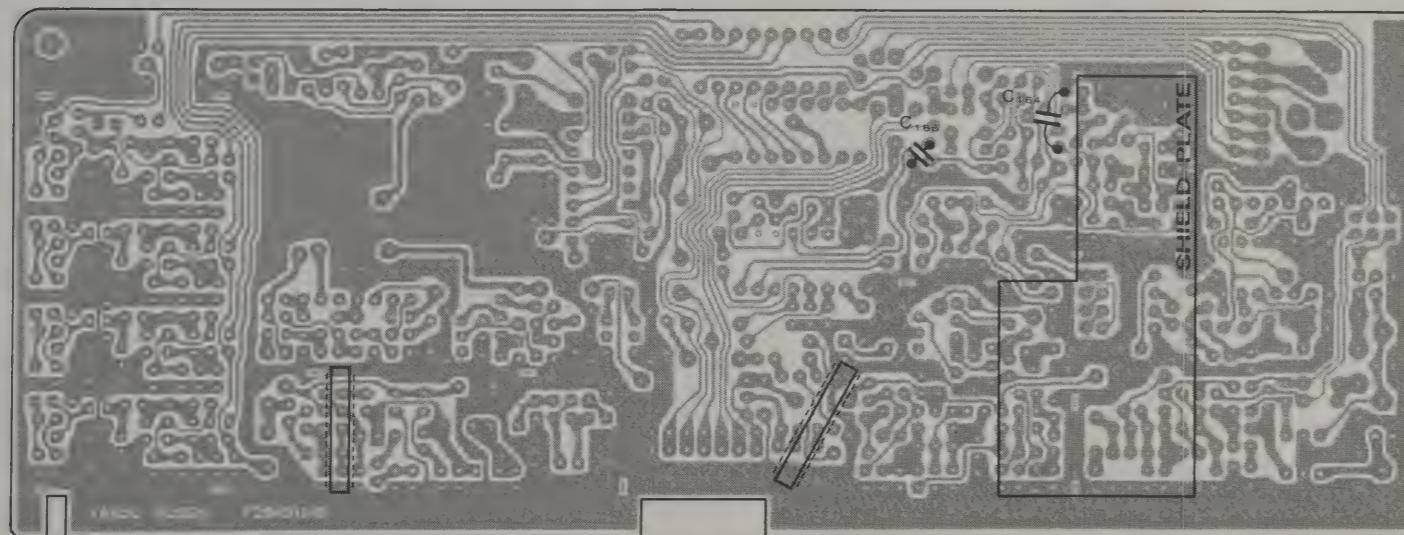
	E (S)	C (D)	B (G <sub>1</sub> )	(G <sub>2</sub> )	REMARKS
Q8101	7.4	1.5	1.5	4.3	
Q8102	1.7/0	8.9/8.2	0/0		NB OFF/ON
Q8103	-8.8	6.4	-8.9		
Q8104	-9.1	4.3	-9.0		

LOCAL UNIT

## **PARTS LAYOUT**



Component side (obverse)



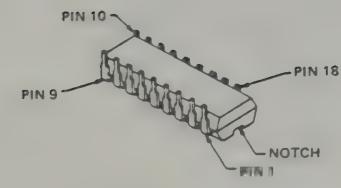
### Solder side (obverse)

## LOCAL UNIT IC VOLTAGE CHART

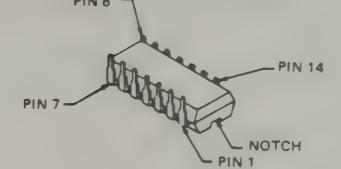
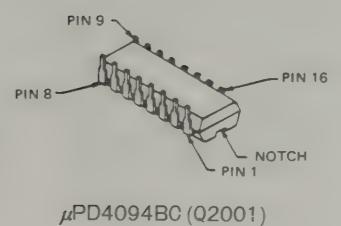
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	REMARKS
Q2001	—	—	—	0	4.8	0	0	0	0	0	0	4.8	0	0	5.0	5.0			14MHz
Q2002	0	0	4.8	0	0	4.8	0	0	8.8	0	0	0	7.6	0	0	7.6	-0.4	0	14MHz, MODE USB
Q2009	6.4	3.8	2.7	0	2.7	3.8	3.8	7.8											14MHz, MODE USB
Q2012	6.4	3.8	2.7	0	2.7	3.8	3.8	7.7											14MHz, MODE USB
Q2013	0	0	4.9	2.6	2.6	0	4.9	2.5											14MHz, MODE USB
Q2014	0	4.9	0	0	0	0	0	0	2.5	0	2.5	2.5	2.3	4.9					14MHz, MODE USB
Q2018	-2.4	—	—	—	2.1	2.2	0.5	0	—	—	2.4	5.0	4.2	0					14MHz, MODE USB
Q2021	5.9	5.2	4.8	0	2.6	2.6	2.6												14MHz, MODE USB
Q2024	-2.4	—	—	—	2.2	1.9	0.5	0	—	—	0.5	4.8	2.0	0					14MHz, MODE USB

## LOCAL UNIT VOLTAGE CHART (DC VOLT)

	E (S)	C (D)	B (G)	REMARKS
Q2003	3.1	8.1	3.9	
Q2004	3.5	8.1	4.2	
Q2005	1.4	8.1	2.2	
Q2006	0/0	0.7/0	0/0.7	RX/TX, MODE CW
Q2007	2.0	6.6	2.0	MODE USB
Q2008	1.7	8.0	2.4	MODE USB
Q2010	1.8	8.4	2.5	
Q2011	1.9	8.4	2.6	
Q2015	3.6	8.0	4.2	
Q2016	2.3	8.3	2.9	
Q2017	1.0	8.4	0	
Q2019	8.6	0.5	0.6	
Q2020	0	5.6	0.7	
Q2022	2.5	8.3	3.2	
Q2025	0/0	5.0/0	0/0.6	PLL LOCK/UNLOCK
Q2026	0.8	8.6	0.5	14MHz
Q2027	0.1	5.3	0.8	14MHz
Q2028	2.6	7.1	3.3	3.5MHz
Q2029	2.6	7.1	3.3	28MHz
Q2030	2.6	7.1	3.3	18MHz
Q2031	3.1	7.0	3.9	28MHz
Q2032	2.5	8.3	3.3	
Q2034	2.8	8.7	3.5	



M54564P (Q2002)



CX-7925B (Q2018,2024)  
 $\mu$ PD4013BC (Q2014)

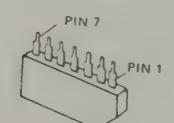


2SC458C (Q2004~2008,  
2010,2011,  
2015 2025)

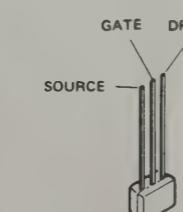
2SC535B (Q2003,2016,  
2022,2028-  
2032)

2SC732TMBL (Q2020.2027)

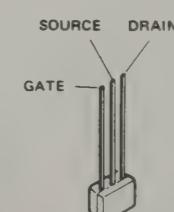
2SC2053 (Q2034)



WPC1037H (02021)

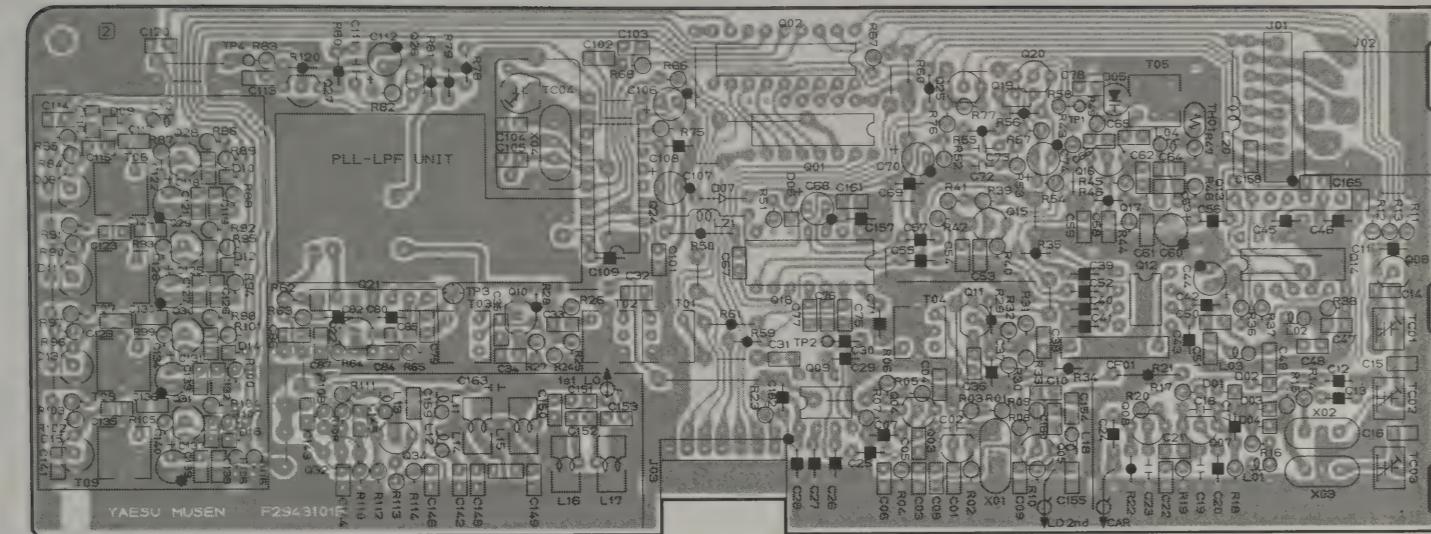


2SK184Y (Q2019,2026)

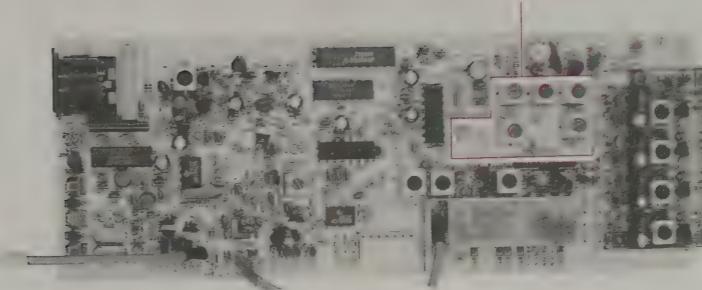


2SK192AGR (Q2017)

# LOCAL UNIT



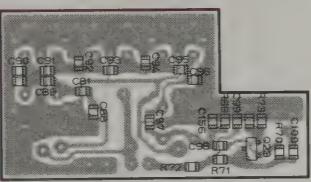
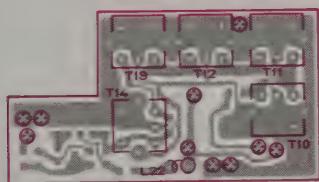
PLL-LPF UNIT



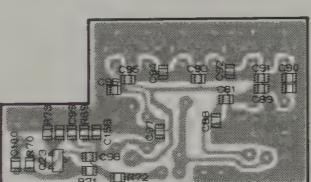
CIRCUIT DIAGRAM

Component side (reverse)

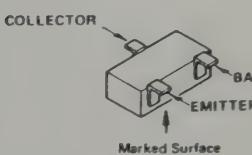
## PLL-LPF UNIT PARTS LAYOUT



Component side (obverse)

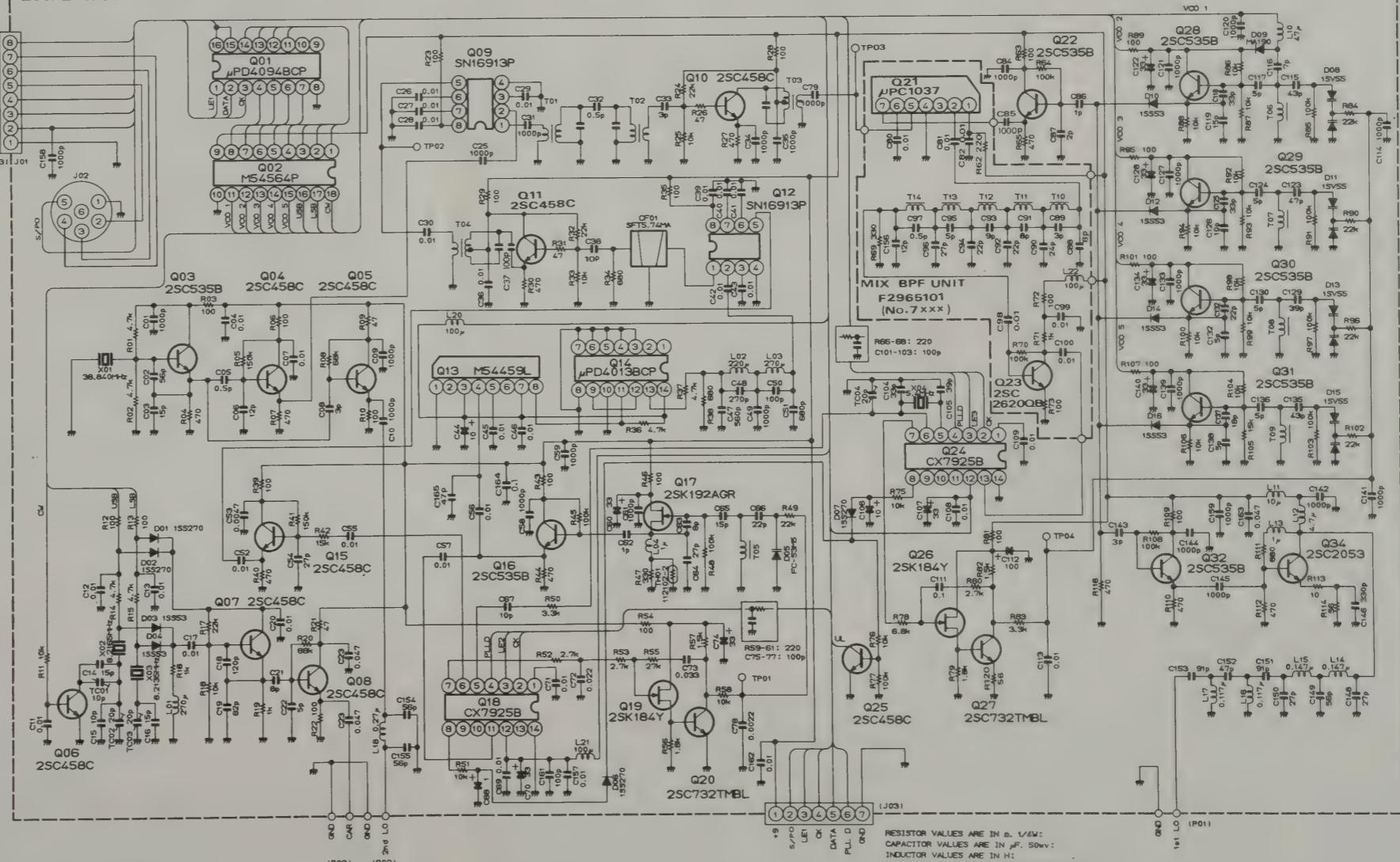


Solder side (reverse)



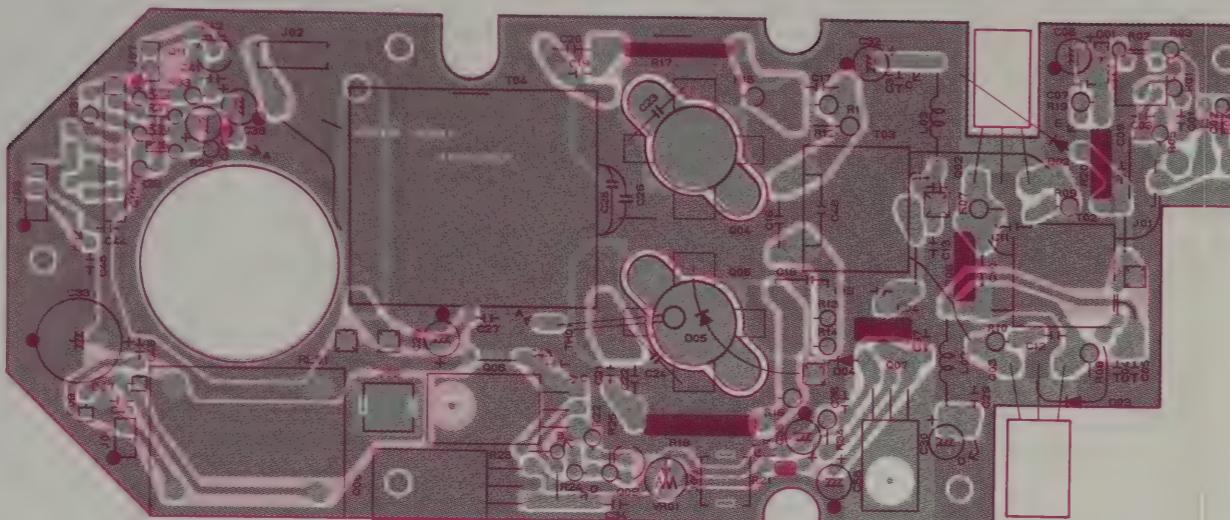
2SC2620QB (Q7023)

LOCAL UNIT F2943101(No.2xxx)

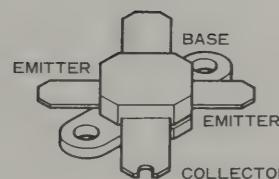


# 100W PA UNIT

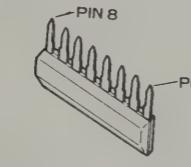
## PARTS LAYOUT



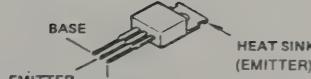
Component side (obverse)



2SC3240 (Q5004,5005)



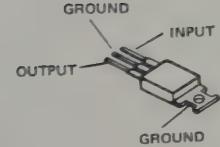
M5218L (Q5010)



2SB824R (Q5008)  
2SC2166 (Q5001)



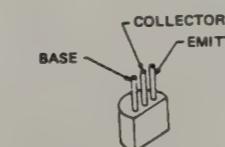
2SC3133 (Q5002,5003)



μPC7808H (Q5006)



2SD882Q (Q5007)



2SC458D (Q5009)  
2SC2001 (Q5011)

## PA UNIT VOLTAGE CHART

(DC VOLT)

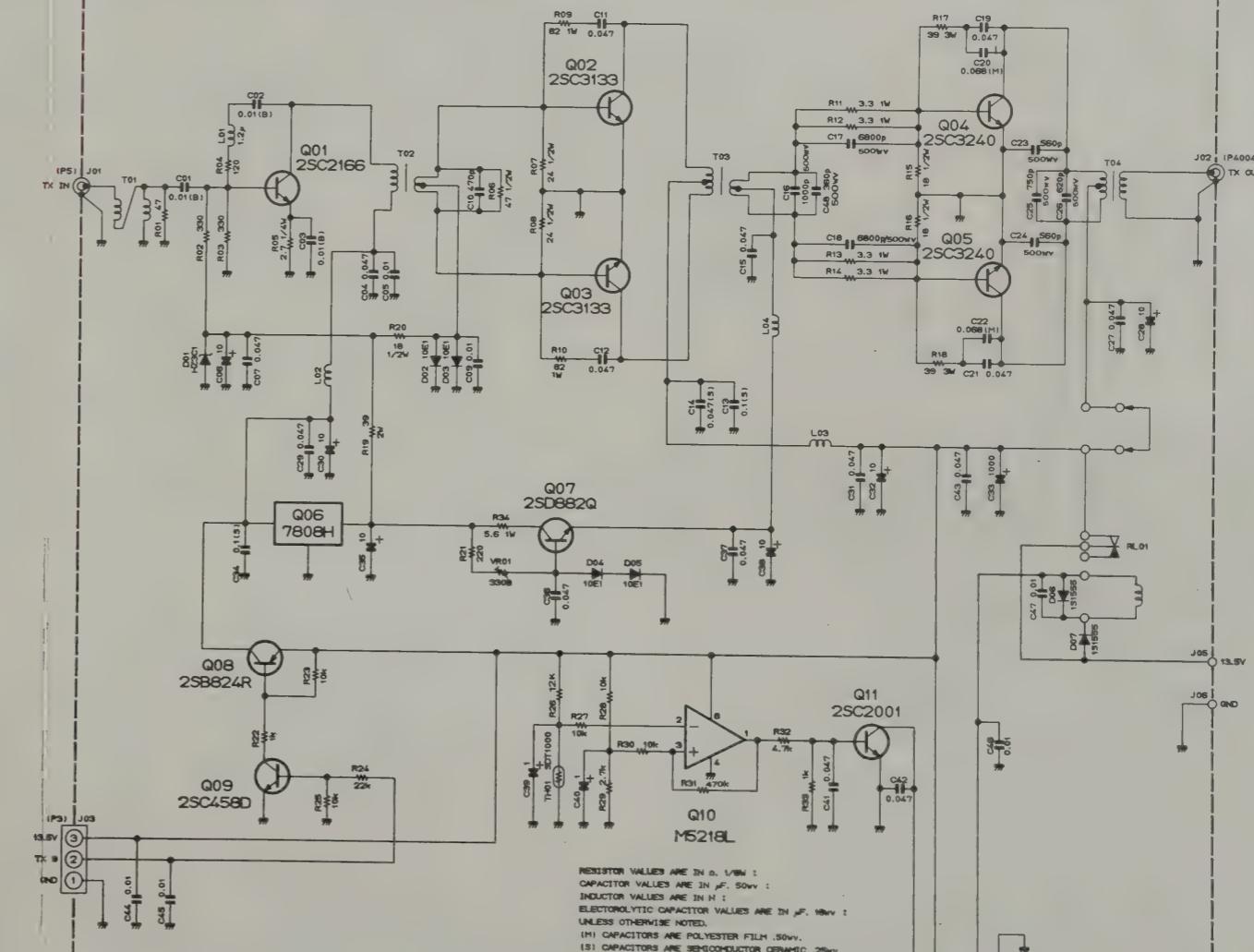
	E	C	B	REMARKS
Q5001	0/0.4	0/13.4	0/1.2	RX/TX
Q5002	0/0	135/135	0/0.7	RX/TX
Q5003	0/0	135/135	0/0.7	RX/TX
Q5004	0/0	135/135	0/0.6	RX/TX
Q5005	0/0	135/135	0/0.6	RX/TX
Q5007	0.4/1.4	0/7.6	0/0.7	RX/TX
Q5008	135/135	0.5/13.4	135/127	RX/TX
Q5009	0/0	135/0.1	0/0.7	RX/TX
Q5010	0	13.5	0.2	

## PA UNIT IC VOLTAGE CHART

(DC VOLT)

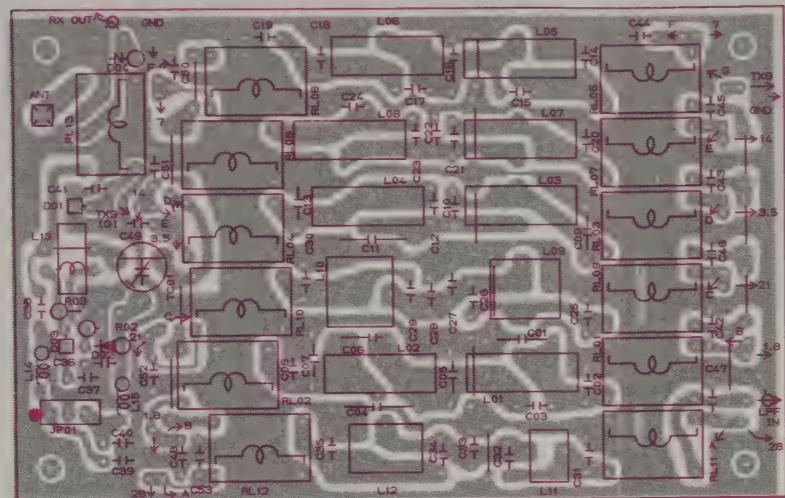
	1 (IN)	2 (GND)	3 (OUT)	4	5	6	7	8	REMARKS
Q5006	0.4/13.4	0/0	0/8.0						RX/TX
Q5010	1.4/1.3	40-70/10-30	2.8/3.1	0/0	—	—	—	13.5/13.5	FAN OFF/ON

100W PA UNIT F2947000 (No.5xxx)

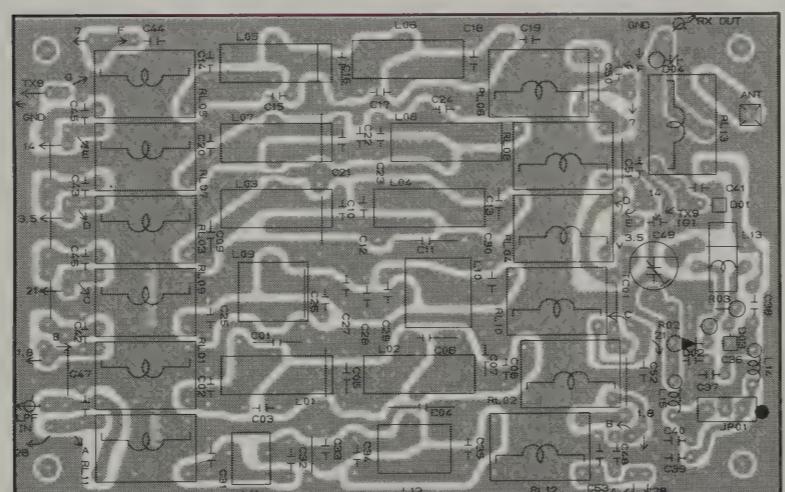


## CIRCUIT DIAGRAM

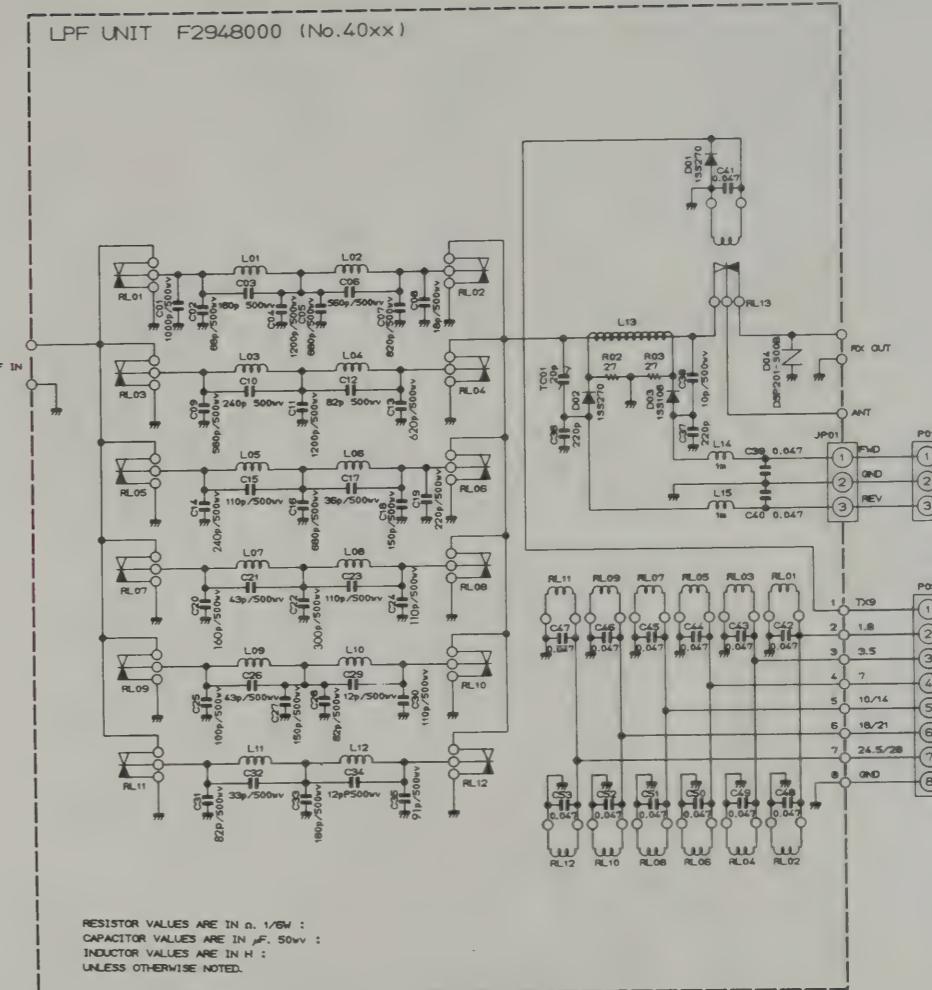
## PARTS LAYOUT



Component side (obverse)



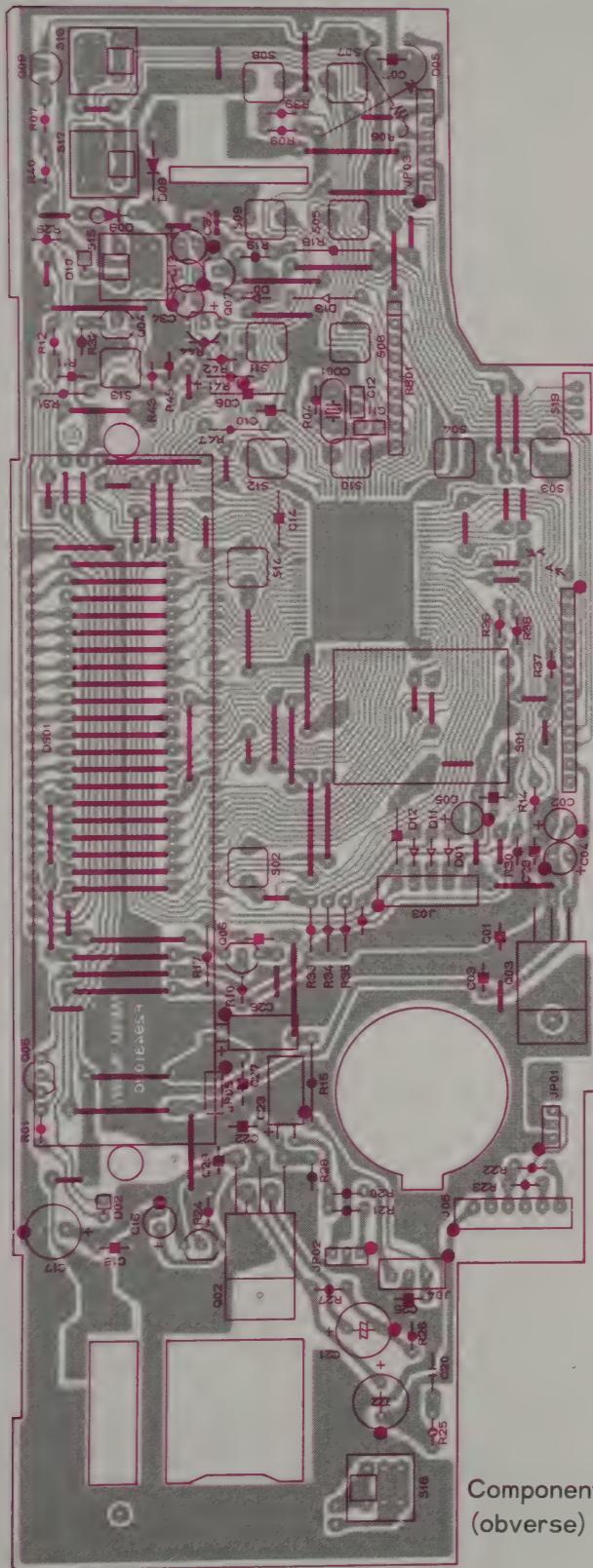
Component side (reverse)



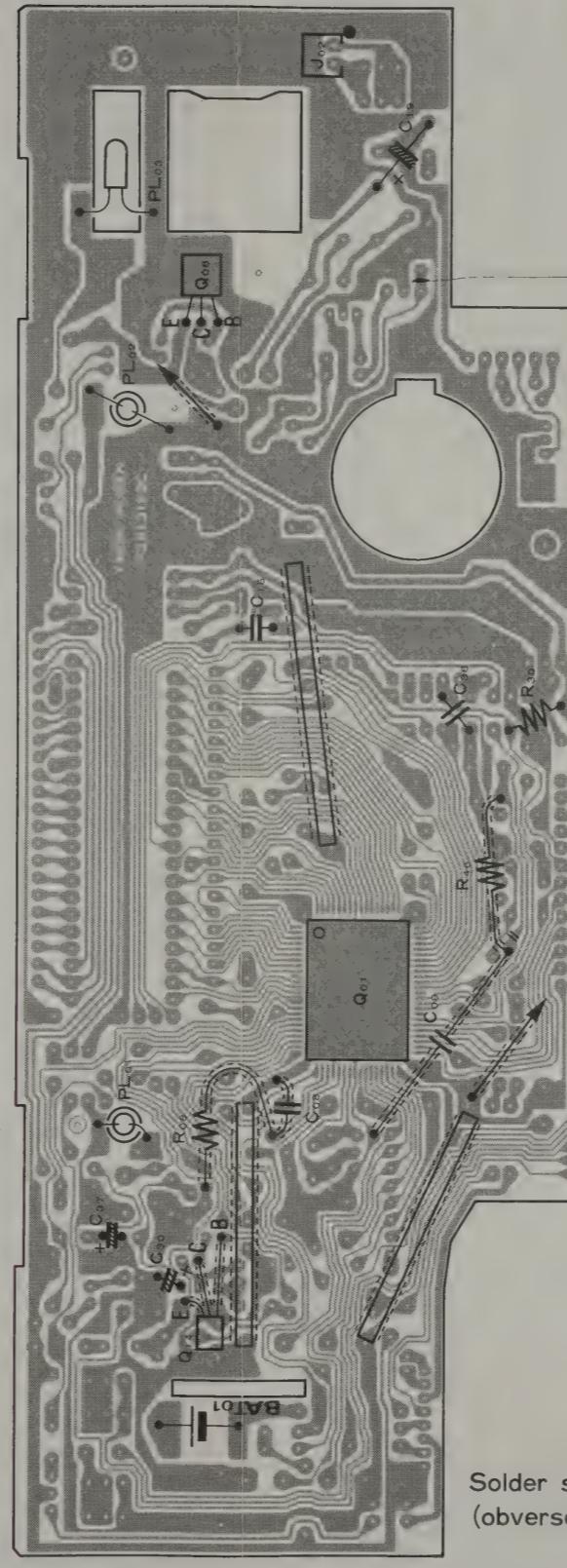
## CIRCUIT DIAGRAM

# DISPLAY UNIT

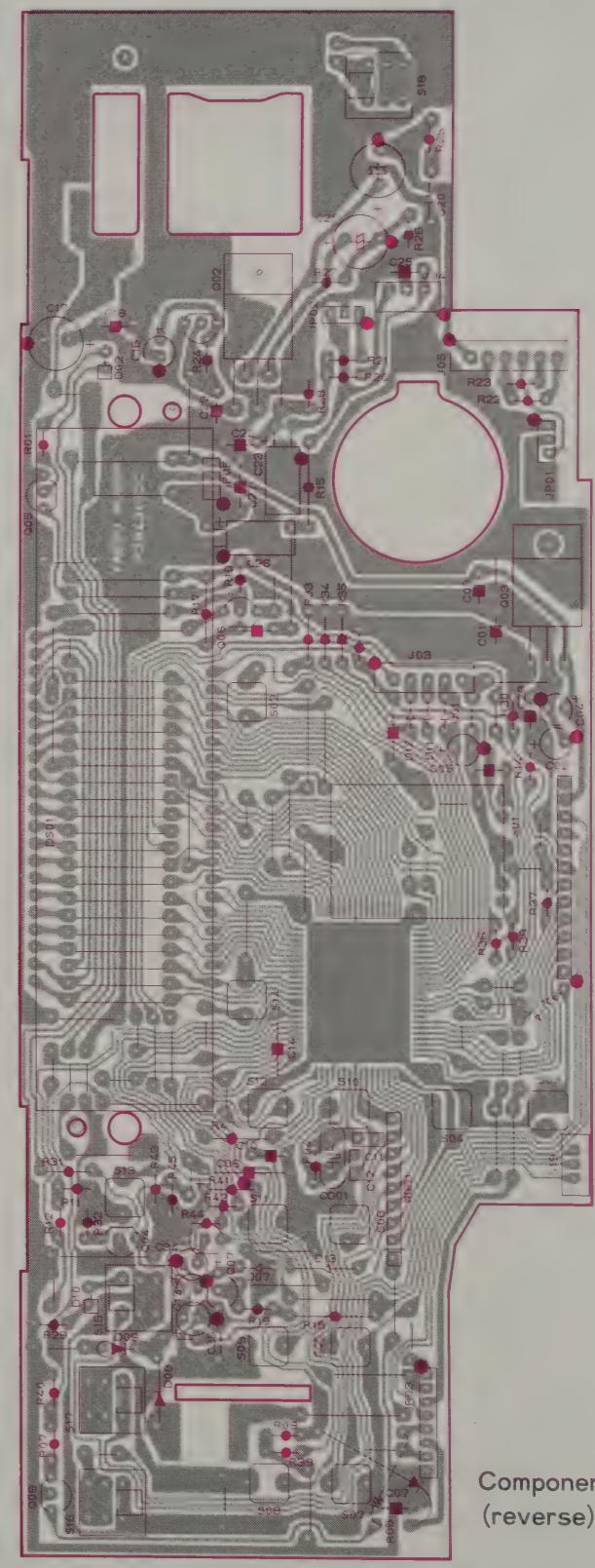
## PARTS LAYOUT



Component side  
(obverse)



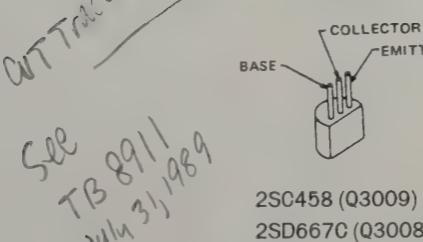
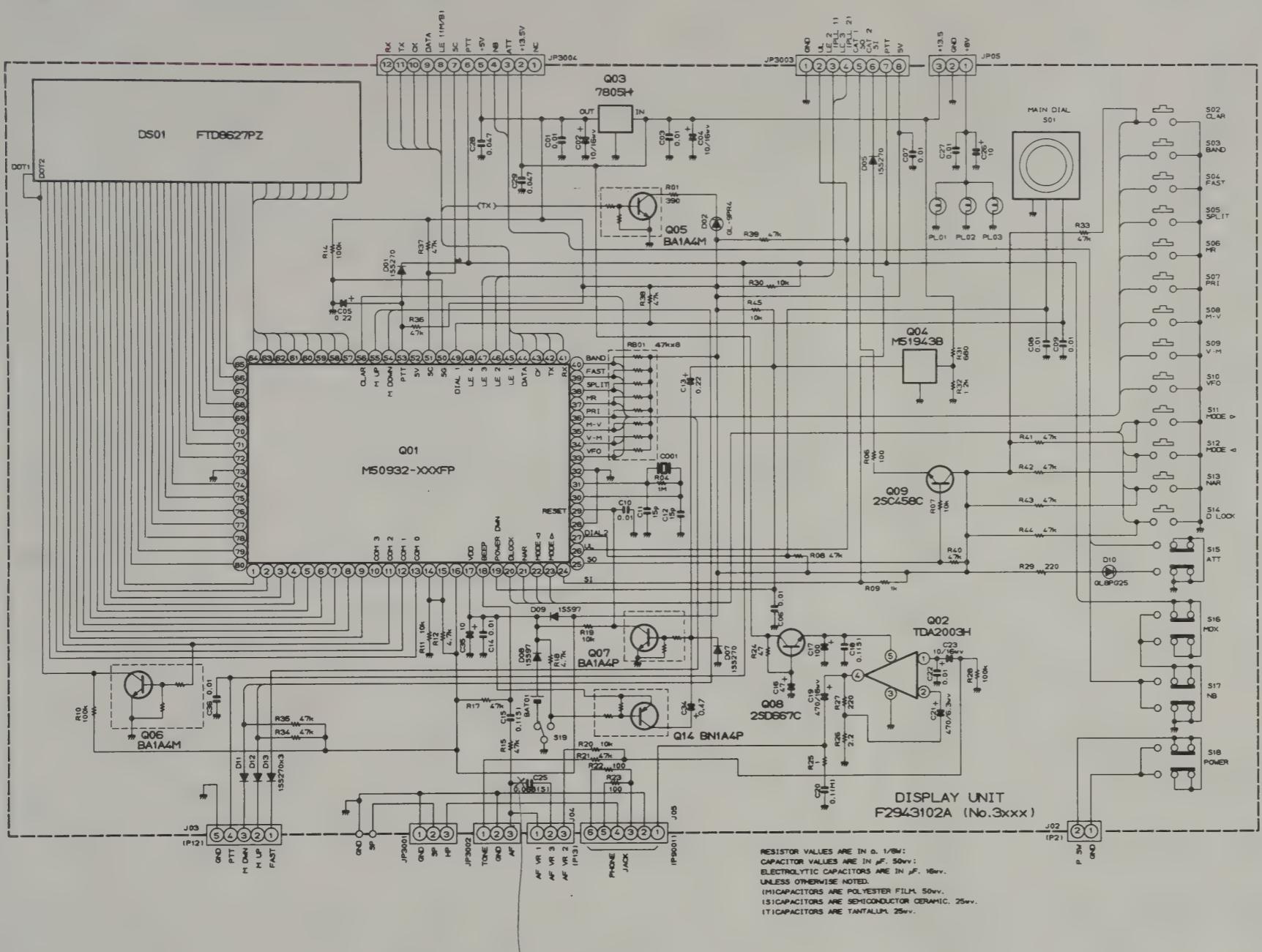
Solder side  
(obverse)



Component side  
(reverse)

# DISPLAY UNIT

## CIRCUIT DIAGRAM



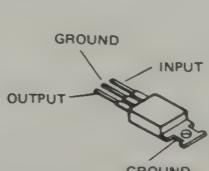
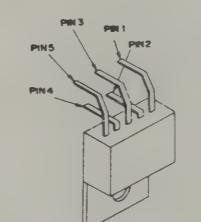
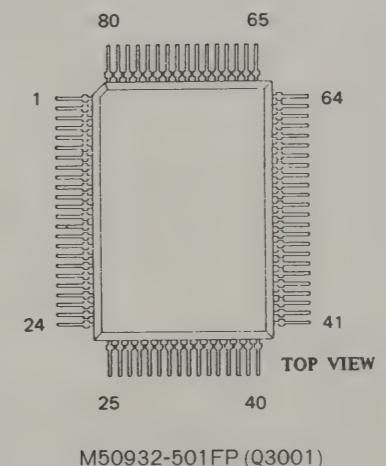
BA1A4M (Q3005,3006)  
BA1A4P (Q3007)  
BN1A4P (Q3014)

DISPLAY UNIT VOLTAGE CHART  
(DC VOLT)

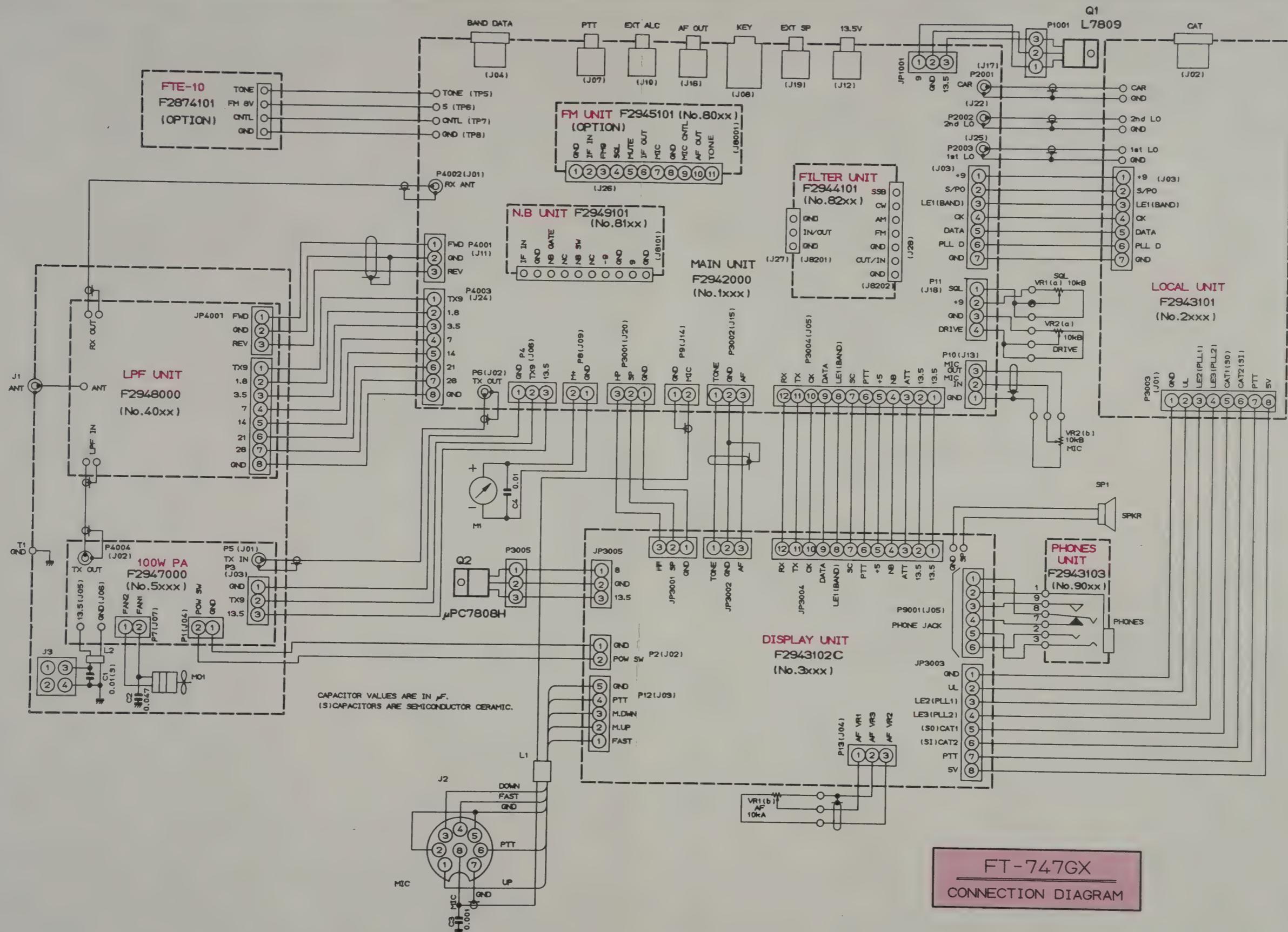
	E	C	B	REMARKS
Q3005	0/0	3.5/0	0/4.5	RX/TX
Q3006	2.7	0.8	0	
Q3007	0	4.6	0	
Q3008	12.7	13.4	13.4	
Q3009	4.2	5.0	4.6	
Q3014	4.6	0	4.0	

DISPLAY UNIT VOLTAGE CHART  
(DC VOLT)

	1 (IN)	2 (GND)	3 (OUT)	4	5	REMARKS
Q3002	0.7	0.1	0	4.8	12.7	
Q3003	13.5	0	5.0			
Q3004	8.3	0	5.0			

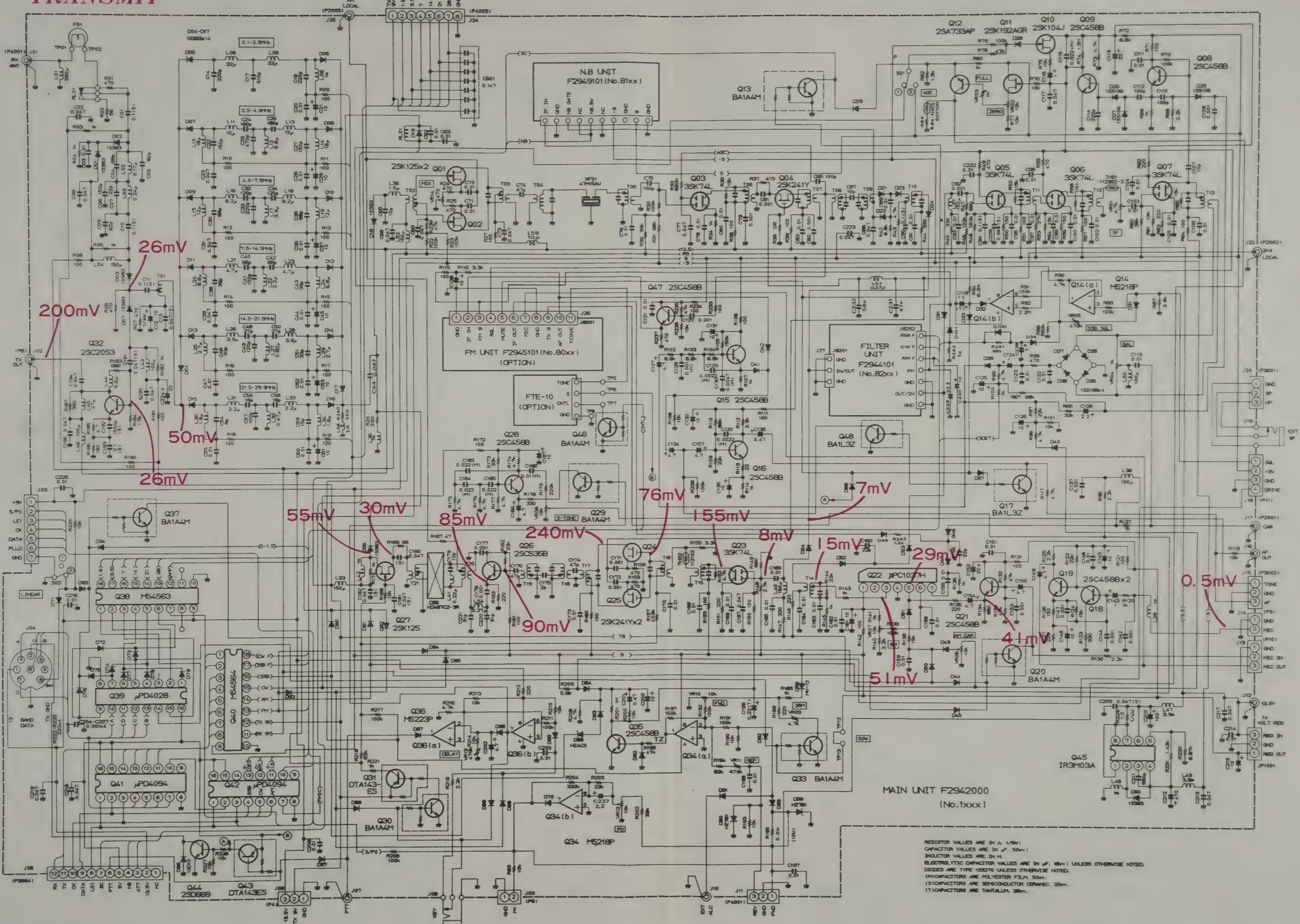


## CONNECTION DIAGRAM



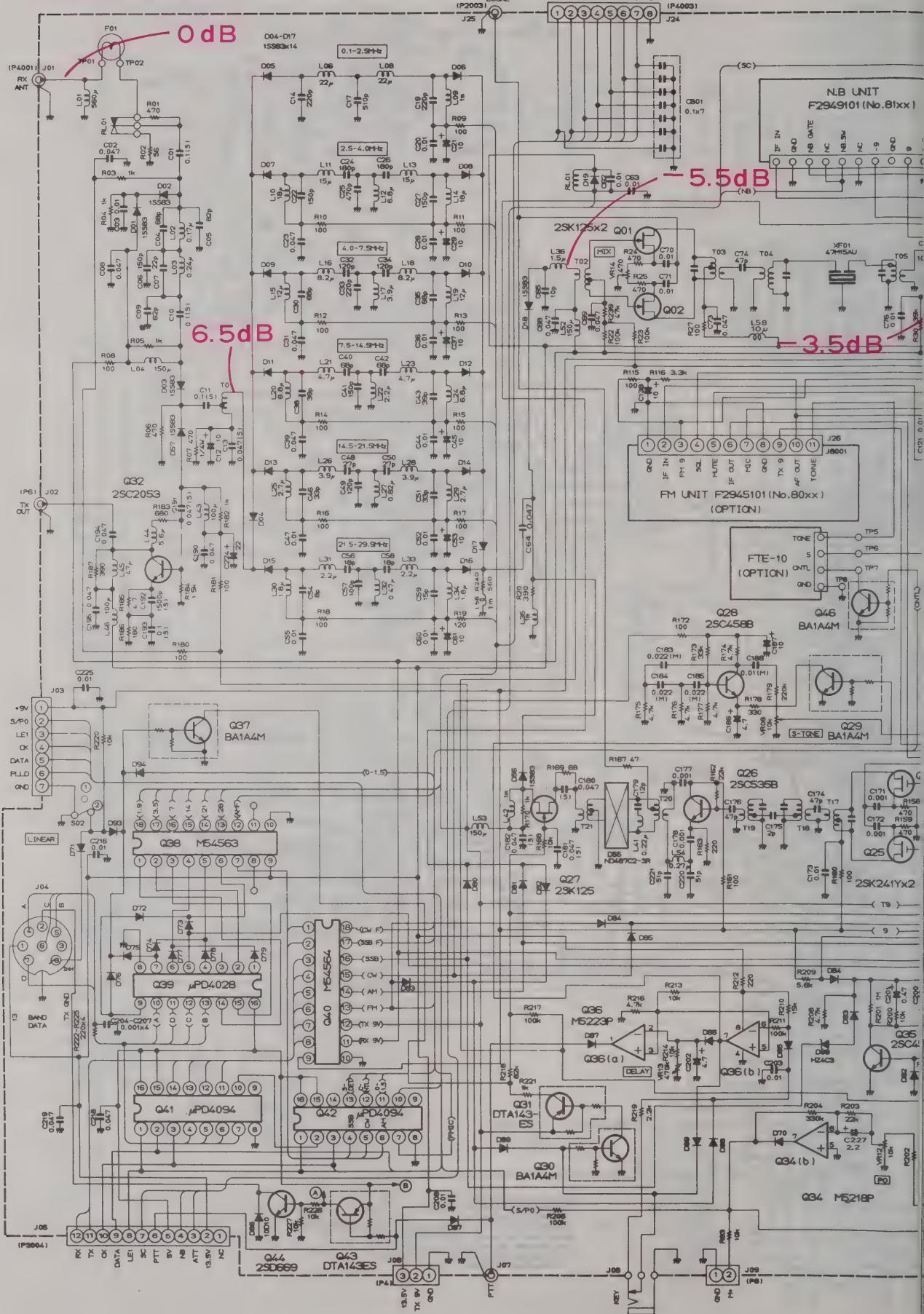
# LEVEL DIAGRAM

## TRANSMIT



## LEVEL DIAGRAM

## *RECEIVE*



# TECHNICAL BULLETIN



YAESU

FILE NO: TB 8911  
RELEASE DATE: July 31, 1989

Model No. FT-747GX

Problem or Symptom: Low Response to Receive-Audio Highs.

Expected Results of Modification: Expands Receive-Audio Passband to Approximately 3 KHz.

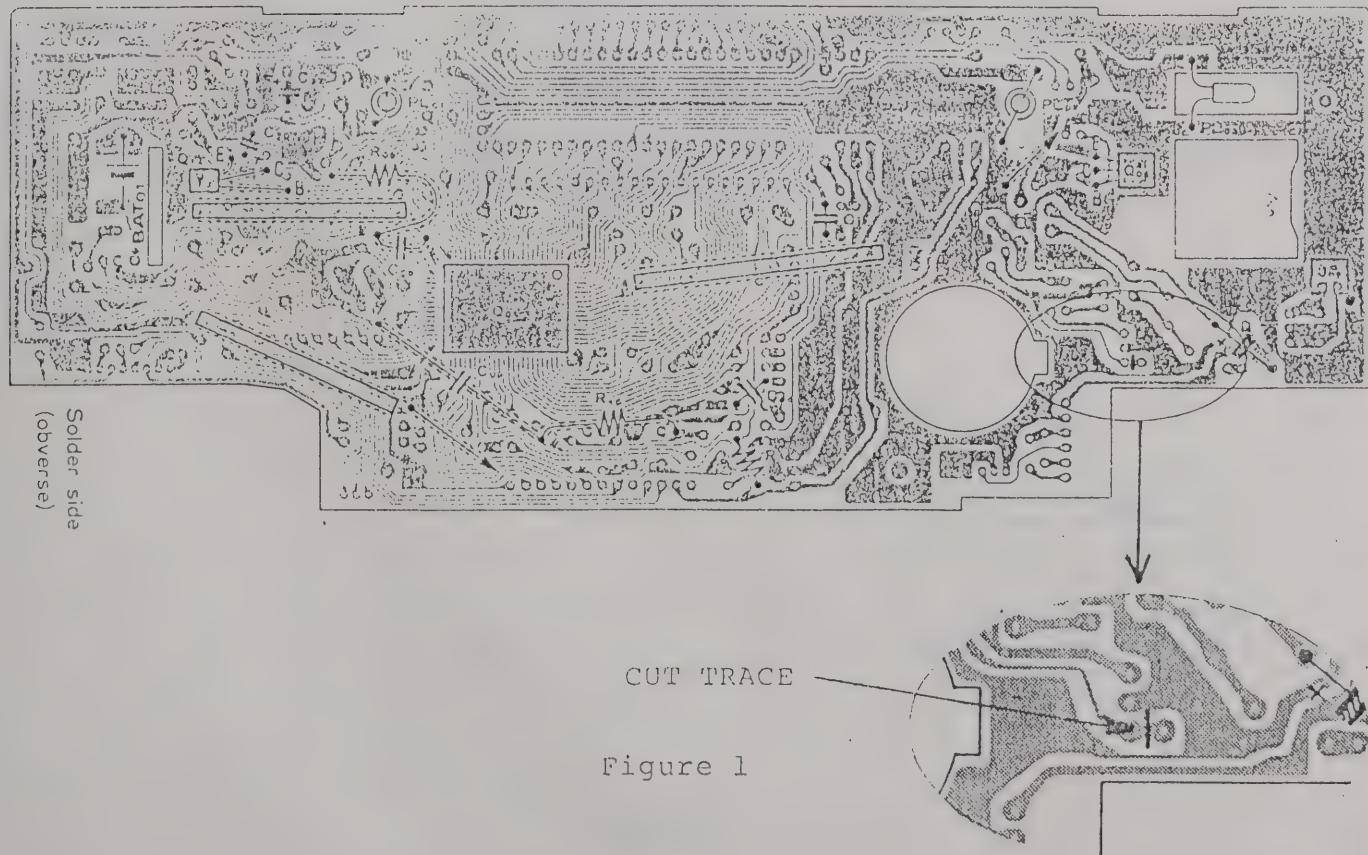
Component Changes: None

Component Addition: None

Component Deletion: Device Number-C3025

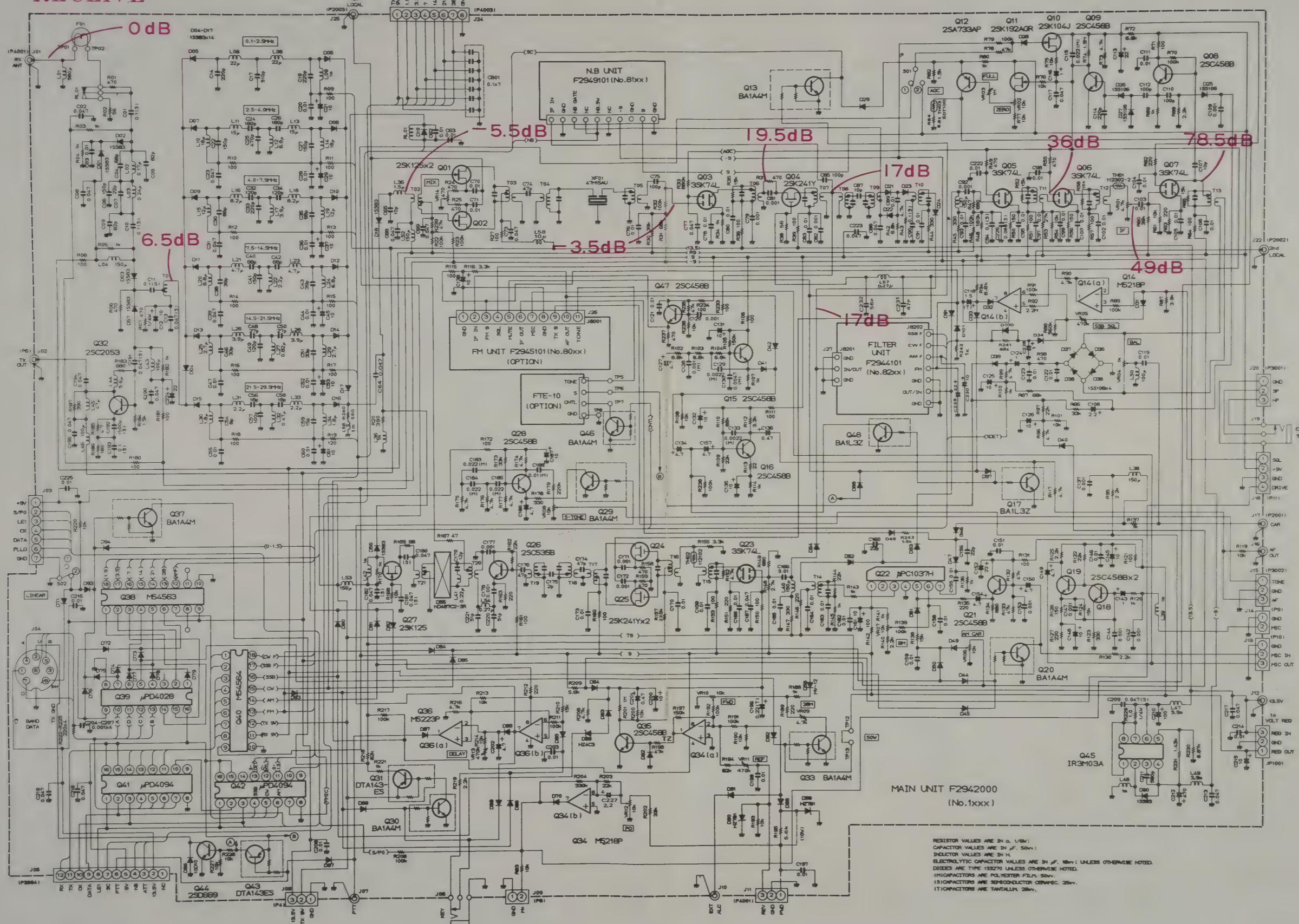
Location: Display Unit, F2943102

- Procedure:
1. Remove top cover as shown on page 23 of the Instructional Manual.
  2. Disconnect and lay the front panel down so that solder side of the Display Unit PB is accessible.
  3. Refer to Figure 1 for the location of the trace which must be cut. CAUTION - Make sure that only the one trace is cut, but also make sure that it is cut completely.
  4. Refer to Figure 2 for circuit change.



# LEVEL DIAGRAM

## RECEIVE



# TECHNICAL BULLETIN



YAESU

FILE NO: TB 8911  
RELEASE DATE: July 31, 1989

Model No. FT-747GX

Problem or Symptom: Low Response to Receive-Audio Highs.

Expected Results of Modification: Expands Receive-Audio Passband to Approximately 3 KHz.

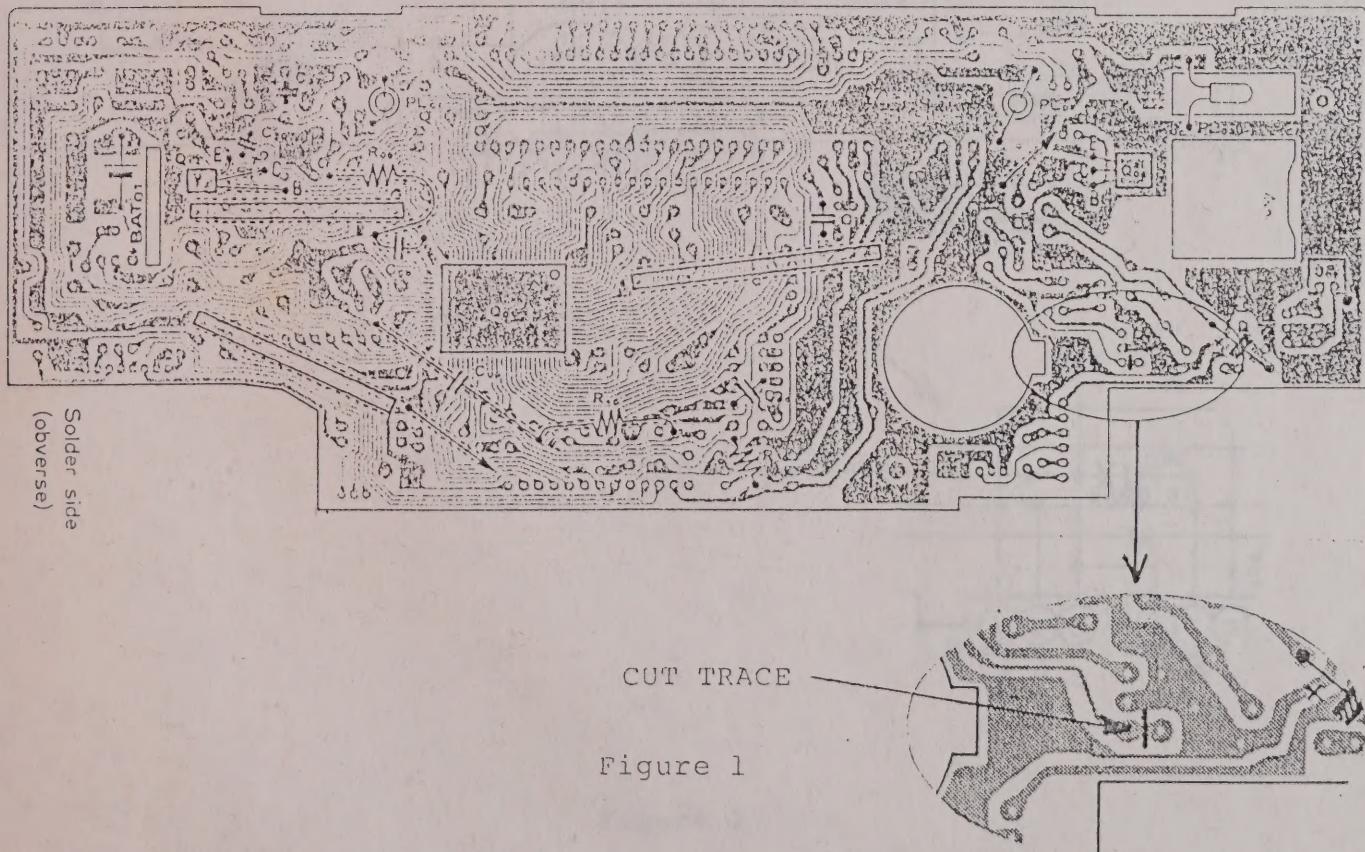
Component Changes: None

Component Addition: None

Component Deletion: Device Number-C3025

Location: Display Unit, F2943102

- Procedure:
1. Remove top cover as shown on page 23 of the Instructional Manual.
  2. Disconnect and lay the front panel down so that solder side of the Display Unit PB is accessible.
  3. Refer to Figure 1 for the location of the trace which must be cut. CAUTION - Make sure that only the one trace is cut, but also make sure that it is cut completely.
  4. Refer to Figure 2 for circuit change.





## CIRCUIT DIAGRAM

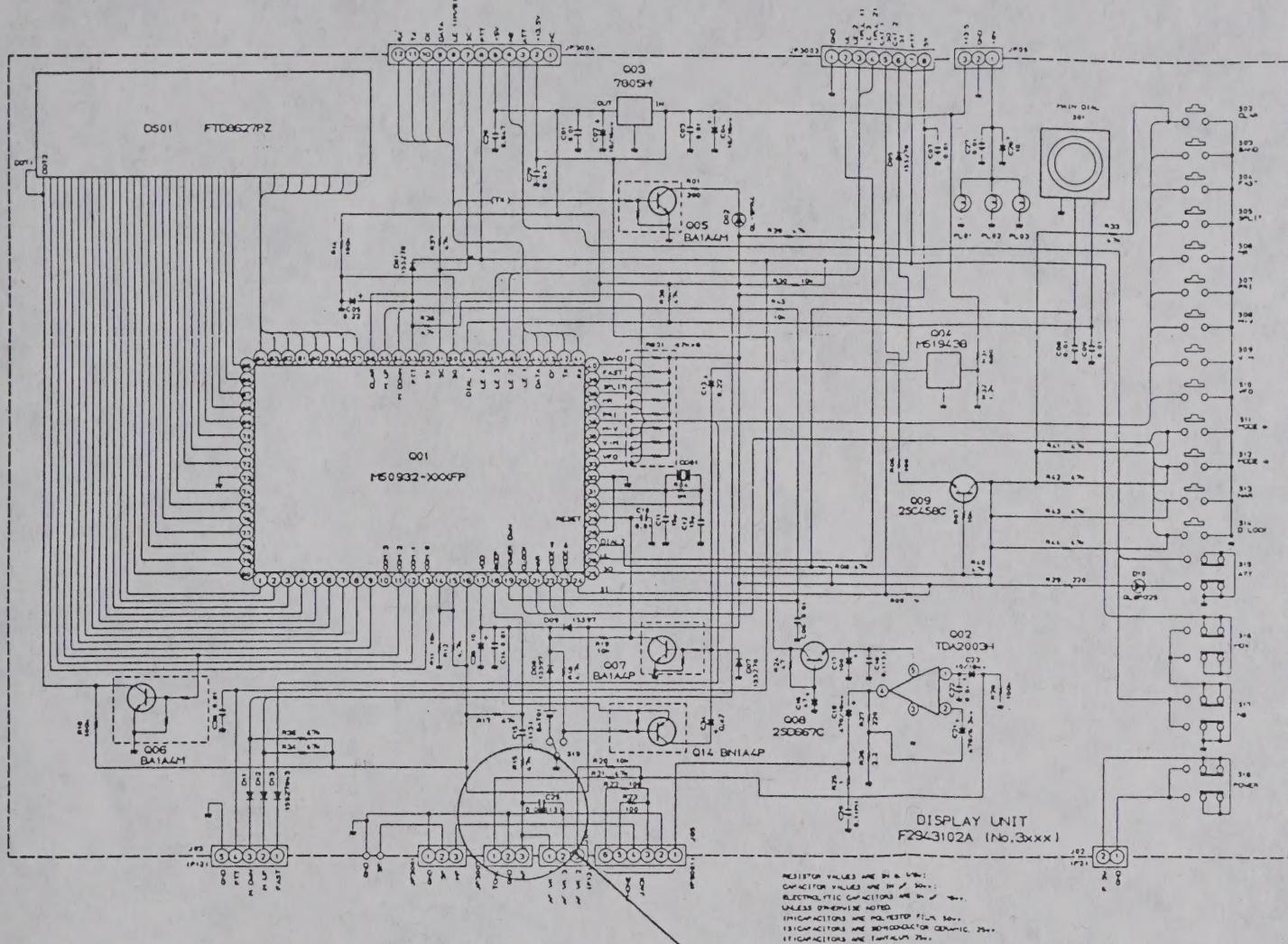


Figure 2

